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By Francis Flagg

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By Harl Vincent

Concluding
Dr. Edward E. Smith's Story—
TRIPLANETARY

VOL. 8, NO. 12 AMAZING STORIES APRIL 1934

The TIGER *in the* House

Drawn from life by Dan Smith

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AMAZING STORIES

Science Fiction

Vol. 8 APRIL, 1934 No. 12

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Our Cover

depicts a scene from the story, "The Mentanicals," by Francis Flagg—Drawn by Morey

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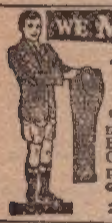

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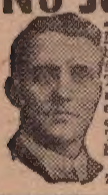

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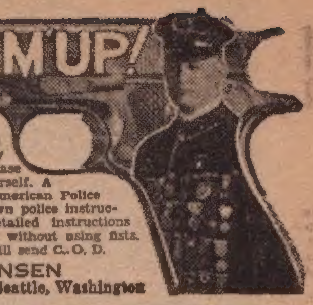

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AMAZING STORIES

THE MAGAZINE OF SCIENCE FICTION

VOLUME 8

April, 1934 No. 12

T. O'CONOR SLOANE, Ph.D., *Editor*

Editorial and General Offices: 222 West 39th Street, New York, N. Y.

Extravagant Fiction Today . . . . . Cold Fact Tomorrow

Conic Sections

By T. O'CONOR SLOANE, Ph.D.

A POINT as a scientific conception is defined as location without size or space. It may be taken as the origin or starting point of measurements and dimensions. It is non-dimensional space, which is a sort of contradictory way of putting it, but it sometimes happens that contradictions do explain things.

So starting with our point suppose we move it along and its trace or track is left after it as it proceeds. This gives us a line, which taken in the abstract, has length and nothing else. It may be entitled space of one dimension, for it has no width or height. Now move the line along in a direction other than that of its length and it gives us a plane, which has length and width but no thickness. Therefore it is space of two dimensions. A good deal of use has been made of the conception of the plane, and of a two dimensional being, who could be imprisoned by laying a thread in a closed figure around him.

Next we may move our plane in any direction other than either that of its length and breadth. This gives a third dimension and we have a solid. We are three dimensional beings, our surroundings are three dimensional and we seem to have reached the limiting number of dimensions. It requires a vivid imagination to formulate a four dimensional object. But the effort is a frequent one, and we find the attempt made to depict a four dimensional solid or ultrasolid which is called a tessaract. This word is derived from the Greek word for four. It is perfectly fair to pronounce the effort a failure in its result—the tesseract tells nothing.

When it comes to defining four dimensional space, the fourth dimension is sometimes entitled space-time, but that does not tell us much. In "Paradise Lost," Milton describes the fallen angels as discussing "free will, fixed fate, foreknowledge absolute," and says they "find no end in wandering mazes lost." This is substantially what happens to us when we try to figure out a four dimensional object. We cannot conceive of it nor picture it to ourselves; it transcends imagination.

If we think of a plane of limited area attached to an axis and turned around it, a curved surface would be formed—"generated" if we employ more scientific terminology—whose shape would depend on the contour of the plane, and the surface would enclose a volume. Thus we get a three dimensional object from a two dimensional surface by simple rotation. Surfaces thus formed and the solids they enclose are called respectively surfaces of rotation and solids of rotation or revolution. Thus a sphere is a solid of rotation generated by rotating a circle about its diameter.

All that we have given may seem elementary, but it is precisely the elements which so many of us fail on. A globe or a billiard ball is simple enough to look at, but how often do we picture their generation by the rotating of circles around their diameters? The most ordinary objects we meet with have their individual stories to tell us. The very elements of our knowledge give the basis for an expanding amount of true science, a great proportion of which is completely missed by too many of us.

Figure in your imagination a right angle triangle standing on its base and rotated completely around with its vertical side as its axis. It will generate a solid, which is a cone, and this is the basis of three very important curves called conic sections. It would be interesting to know what proportion of us could tell what conic sections are. We may start with the simplest.

Let a plane intersect a cone, cut through it, being perpendicular to its axis, or, what is the same thing, parallel to its base. The surface thus formed will obviously be a circle and is the first or simplest, we may call it, of the conic sections. Webster refers to it as a special case of the ellipse. Now if the plane cutting across or intersecting the cone is out of parallel with the base and yet not parallel with its side, it gives an ellipse. In everyday phrase this is often called an oval, which is quite incorrect. An ellipse is like a prolonged or drawn out circle and is perfectly symmetrical, while an oval is one sided, it is of the shape of the longitudinal section of an egg, by a plane through its longer axis. The oval is therefore of smaller contour at one end than at the other, and is named from the Latin word *ovum*, meaning an egg. But our friend Webster's Unabridged "passes up," as they say the word "oval," accepting it as the popular name for an ellipse.

If the plane intersecting the cone is inclined a little more so as to be parallel to its side, a curve is produced, one which is closed at one end and open at the other, no matter how large the cone may be. This is a parabola. Now let the intersecting plane be parallel to the axis of the cone and to one side of it and we have the hyperbola, another open curve.

These are the historic and classic conic sections; taking the circle as an ellipse three of them are all that can be produced. There is more than dry mathematical interest in them. The ellipse has been used in the design for the arches of stone bridges. There is a method of drawing an approximate ellipse using bits of circles or arcs thereof

so as to get an approximation to the true curve. But this "false ellipse," as it is called, is considered to give an inferior architectural effect when compared with the true ellipse.

Waterloo Bridge across the Thames is one of the glories of London and of the great architect, John Rennie. This gives the effect of the ellipse in bridge construction, yet the beautiful structure was threatened by the powers that be, with "improvement," in the shape of destruction and tearing it down, until London rose in arms and now it is to be preserved.

Another interesting thing to be noted in speaking of the ellipse is that the planets in the solar system follow the curves of ellipses in their paths around the great luminary, carrying out several curious laws in their courses through space.

The line drawn from the center of a circle to its periphery is called its radius. In the ellipse there are two such lines and they must be spoken of as radius vectors. The radius of a circle properly speaking is a radius vector, but the last word is omitted when referring to it. Now the earth in following its orbit around the sun pursues an elliptical path. The radius vectors of an ellipse, there are two of them, meet at all points on its circumference, and our earth, as it were, takes the two radius vectors along with it, but appropriates one of them to itself, so that its motion is referred to only one of them, and this radius vector varies in length as it goes through the three hundred and sixty degrees of its course through space around the sun. The rate of motion or speed of the earth varies—its speed is greatest when the radius vector is shortest.

And here comes the amazingly simple law telling us that the radius vector of the earth, and radius vector of each of the planets always sweeps over equal areas in equal times. Thus a planet moves over more degrees when the radius vector is short than when it is long, and thus is subject to the simplest kind of a law.

And again we meet another amazingly simple law of the motion of the planets which is approximately exact. The square of the time of revolution of a planet around the sun is proportional to the cube of its mean distance from the great luminary. Suppose a planet is three times as far from the sun, on the average, as we terrestrials are. The cube of three ($3 \times 3 \times 3 = 27$) is twenty-seven. Therefore, the square root of twenty-seven, which we may take as five and two-tenths, would be the length of the planet's year, taking the earth's year as one. Or we may multiply $365\frac{1}{2}$ by 5.2 to get the length of the assumed planet's year approximately.

Simple as these laws are there are always annoying fractions to be encounted. The earth's year is not exactly $365\frac{1}{4}$ days in length, and the relative distance of the planets from the sun are in decidedly fractional proportions, one to the other.

The ellipse not only is a beautiful curve for an arch, but it tells us one of the laws of motion of the planets through space. It appears in archiecture and in astronomy, two widely separated subjects.

If a plane is supposed to pass through a sphere, it will always cut out a circle. The cone as we have seen may give any one of three figures when cut by plane, if we take the circle as a special case of the ellipse, but the sphere gives only one. If the plane is passed through an equator, or any other part of the sphere where it is of largest diameter, it gives what is called a great circle. This brings before us a curious bit of simplicity in geometry. The outside area

of a sphere is equal to the area of four great circles. If you had an absolutely spherical or round apple, and cut it into two equal pieces, the areas of the two cuts would be equal to the area of the outer surface of one of the halves of the apple.

As a contrast to this the factor by which the diameter of a circle must be multiplied to give the circumference has never been calculated to its end. It is 3 followed by a decimal which has been carried to over one hundred figures, with no hopes of reaching the last one.

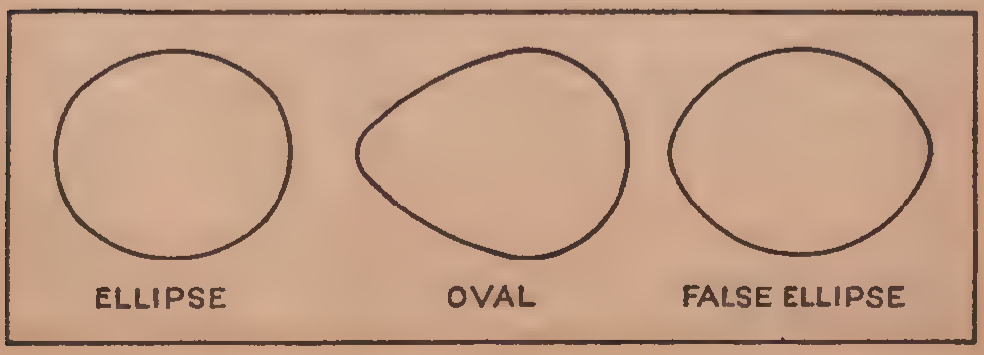
We may go back to Milton's fallen angels and say that we "find no end in wandering mazes lost." Probably the decimal in question is without end.

The parabola possesses some features of interest outside of its mathematical relations. If a projectile were discharged in a horizontal direction in a vacuum and subjected to the pull of gravity, it would follow a parabolic course as it descended to the earth. A marble swept off a table by a cane or otherwise, in its fall to the floor will follow a virtually parabolic curve. It has the resistance of the aid to modify the parabola, but its motion is so slow that this does not affect it to any extent. In the case of an artillery projectile the resistance of the air counts for a great deal, because of the high velocity involved, and the curve followed departs from the true parabola and is entitled the ballistic curve.

If a cord, cable or chain is attached to two separated places on the same level, it will hang down in a loop, forming a curve known as a catenary or a "chain curve." Now suppose the cable sustains an evenly distributed load referred to its span and which load is so heavy that the weight of the cable has no perceptible effect, it will take the parabolic curve. A suspension bridge never has either a true catenary or a true parabola for the line of its cable, but a cross between the two, a sort of mixture, the heavy roadway pulling the suspending cables towards a parabolic curve.

There is a horizontal factor in the pull which a cord produces when thus attached. The straighter the cord the greater will the pull be. In the words of Bishop Berkeley, a famous philosopher with theories of his own, "There is no force, however great, can stretch a cord however fine, into a horizontal line, which shall be absolutely straight." (Quoted from memory.) This is absolutely true. The story goes that the good bishop never meant to be poetical in writing the above, he is said to have dropped into verse unconsciously.

THE END



Cat's Eye

By HARL VINCENT

We have all read about the fourth dimension. A great deal has been written about it, either in fiction or seriously, and we have here a true mystery story based on the scientific conception of higher dimensions. These conceptions are woven into one of Harl Vincent's best efforts, and not content with the fourth dimension he even speaks of higher ones. The reader will find that the story is very interesting and that a difficult subject is carried out to a very successful end.

Illustrated by MOREY

CHAPTER I

A Mysterious Stone

WHEN Jim Wyatt first saw the thing cuddled in that grimy palm, he grinned and shook his head. He knew all these old tricks of the panhandlers; saw only that a most decrepit representative of that breed was trying to sell him a bit of colored glass.

About to pass on, Wyatt was arrested by the desperate entreaty in the wizened face and the violent trembling of the hand laid on his arm. There was a curious look in the nighthawk's eyes. An awful fear, it was that lurked in those watery optics. Stark terror, almost.

"Only half a buck, mister," the old fellow whined.

Wyatt laughed sheepishly and reached into his pocket. "You win," he chuckled. "Here's a dollar. But I don't want the thing. Better keep it for the next sucker."

"No, mister; you keep it. It's worth sump'in, I'm tellin' yuh. Plenty. An' thanks fer th' buck."

With that the astonishing old street Arab thrust the smooth, hard object into Wyatt's hand, letting go of it as if it burned his fingers and then shambling off rapidly into the shadows of Washington Street.

A queer sense of belief in the thing's worth came to Wyatt with his handling of the stone. Not that he thought it so intrinsically valuable, but there was an uncanny light in the brown-gold depths of it like the stare of a basilisk. Sinister cunning was in its gleam, and witchery. It was a tiger's eye, looking up at him with hypnotic gaze.

Shivering unaccountably, he shoved the stone in his pocket. It had seemed almost that the mild breeze from off the Hudson took on a sudden chill. And the rumble of an elevated train over on Greenwich Street, shattering the midnight quiet of downtown New York, came as a distinct shock to his nerves. He shouldn't be working this late, he knew, especially on the inventory of his repair parts stock. It was enough to drive any man to mad imaginings.

He shrugged off the strange feeling that had come over him and turned his steps once more toward the subway at Cortlandt Street.

A pistol shot roared out of the shad-

Others of the red men came from nowhere, seeming to spring up from the very floor, and he was carried, kicking and struggling vainly.

ows he had left behind. A half-human cry followed, ending in a horrible gurgle. There came the shrill notes of a police whistle, and voices shouting, the thunderous exhaust of a powerful car. Wyatt stopped in his tracks.

And then a whimpering, sobbing creature in tattered clothing stumbled into the light. It was the old derelict Wyatt had befriended, and he was clutching at his throat with writhing fingers, his eyes popping from their sockets.

"Beat it, mister!" he croaked. "They're after it. The yellow stone. They'll get yuh sure." Tottering then, his face purpling, he collapsed on the sidewalk and lay still.

A burly policeman hove into view and took in the situation at a glance. With deft fingers he loosened the man's scant clothing and straightened out his limbs.

"Dead," he pronounced, rising and facing Wyatt, who stood rooted to the spot. "Scared to death, looks like."

"Scared! Wasn't he hurt? There was a shot." Shaken by the experience, and much mystified, Wyatt stared foolishly at the officer.

"NAW, I shot over the heads of a couple of guys that was maulin' him, is all. He yelled and ran, and the others got away. In a big Packard, too; can you beat it?"

The patrolman was obviously puzzled. He stood there, looking down at the twisted dead face and scratching his head.

"Sorehead gang, most likely," he said with a grunt of dismissal. "And just another bum dropped dead. Nothing to do about it."

"Wait a minute; listen." Wyatt had the queer stone in his hand and was blurting out his story.

"That thing!" The uniformed one laughed scornfully. "Hell, man; he's been trying to get rid of that for hours. You're stuck, is all. It ain't worth a dime. Throw it away—anything."

"But, say——"

"Aw, forget it. Scram." The officer turned his broad back.

A small crowd of night prowlers was gathering, and others of the police had arrived. Some one produced a ragged tarpaulin and drew it over the face which stared ghastly there under the street light. The patrol van came clanging, and the crowd was warned back.

Muttering disgustedly of the thick-headedness of cops as a class and of this one in particular, Wyatt drew aside. But he returned the tiger's eye to his pocket. There *was* a mystery connected with this stone, and it might be they'd listen to him at the station house. He'd follow the van when they loaded the body inside.

Still it was hardly reasonable to think the polished pebble had anything to do with the case. There was no case at all, when it came to that. It was only a matter of a pair of escaped thugs, already forgotten by the minions of the law, and an outcast meeting a natural death. Apoplexy, they would write on the police blotter, and the poor old fellow would be buried in Potter's Field.

With the ingrained caution that keeps the native New Yorker from mixing in police matters, if he can avoid it, Wyatt decided to leave the scene and forget his idea of visiting the station house. He made his belated way to the subway.

But Jim Wyatt was destined to spend a restless night. The tragedy preyed on his mind. And, even in the snatches of sleep that came to him, it seemed that the baleful eye of the polished mineral was ever upon him.

Daylight was a welcome relief, and he felt much better after his morning shower and shave. But the thing took hold of him with renewed force when

he left his Bronx apartment and boarded the subway for his place of business. He was unable to read his newspaper; instead, he stared vacantly at his fellow passengers. And the tiger's-eye was an uncomfortable lump against his ribs where it reposed in his vest pocket.

Addison Carr! Wyatt's spirits rose when he thought of the one friend to whom he could go with the story. Carr would know what to do in a case like this. He was interested in many things besides his favorite hobby of scientific research; he dabbled in the mysterious and occult; had been through strange adventures. The very man to see.

Wyatt left the subway at Seventy-second Street. This was one morning his downtown garage business could go hang.

In the spacious drawing room of Carr's apartments, Wyatt waited nervously for his friend. The place was gloomy—the house was one of those old brownstone fronts in the Seventies—and Wyatt paced the floor, then stopped suddenly and drew the strange cause of his perturbation from his pocket, placing it gingerly on the mantel. He breathed easier, then laughed aloud at his own silly fears.

When Carr greeted him, he broke out in a torrent of swift speech, telling with excitement the happenings of the night before. He drew his friend to the fireplace and indicated the stone.

"There it is," he wound up. "Now, tell me what's so all-fired important about it and what I'm to do." Wyatt was in a ferment.

Carr picked up the stone and turned it over between a thumb and forefinger, his gray eyes twinkling. "All steamed up this morning, aren't you, Jim?" he grinned. "The idea, waking me up from a sound sleep to listen to a yarn like this. It'll spoil my breakfast."

"Sorry, old man, but the thing sort of got on my nerves. I had to see you, had to tell some one."

"MM-M." Carr sobered, running long fingers through his tousled mop of hair, as was his habit when thinking deeply. "Well, seeing we've started the day with such a bang, lets give a thought to this innocent looking gem."

"Not worth anything, is it?"

"Not a great deal, as ornamental stones go. It's a crocidolite. Most people would call the thing a South African cat's-eye. A mineral silicate with silky fibers and colored with iron oxide, ordinarily found in Griqualand West. When cut *en cabochon** it shows this beautiful chatoyant luster, the line of light across the dome which makes it look up at you like the eye of a feline and gives it its name. So much for its background. Now for its individual history; that's what interests us."

"Yes, why the big to-do about the thing?" Wyatt scratched his chin and gazed at the staring eye, hypnotized anew.

"Creepy thing, at that," mumbled Carr, peering closely at the stone. He fell silent, his brow wrinkled in thought. Then: "I've heard of this stone lately, I think, or one like it. Yes, I know, there was an ad. in yesterday's paper."

With characteristic abruptness he dashed to the hall and was up the stairs two at a bound. In a moment he returned with the crumpled sheets of a newspaper in his arms.

"Here it is," he exclaimed after a quick search. "Luther Emory is advertising for it. Offers a thousand dollars reward and no questions asked. An odd thing, that. Something back of it."

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*A system of cutting a precious or semi-precious stone with a smooth convex surface, without facets.

"A thousand reward, and Lute Emory the owner! I'll say something is behind it!" Wyatt found it difficult to believe what he saw there in black and white. But the description was exact; this was undoubtedly the stone the great explorer had lost.

"Sa-ay," drawled Carr. "I'm going to put this under the microscope. Emory knows something, and so do some other people. Come on, let's find out what it is."

Wyatt followed him into the laboratory and saw him insert the shiny pellet into a receptacle that was part of a ponderous electrical mechanism. Dazzling light bathed the stone at Carr's touch of a switch, and his instrument purred softly from some force from within.

"Microscope!" scoffed Wyatt. "That's no microscope."

Carr laughed. He was peering through a double eye-piece, making mysterious adjustments as he replied, "Not exactly a microscope, no. It's a device utilizing radio waves which bore right into an object. We are able to see beneath the surface with this, and the magnification can be made enormous. . . . Say!"

"What's wrong?" Wyatt was startled by the intensity of his friend's exclamation and the sudden rigidity of his crouched body as those long fingers tightened on the control knobs of the instrument.

"Why-y——" Carr snapped his lean form erect, his face white, gazed incredulous.

And then it was as if a writhing, living substance flicked out of the receptacle which held the cat's-eye and splashed against Carr's temple, clinging there a moment like a dab of quivering jelly and then vanished in a puff of light.

Wyatt blinked as he would before a photographer's flash lamp. He thought at first that his eyes had deceived him.

CHAPTER II

Ayra

BUT Carr's moan and his peculiar actions were enough to show that something very much out of the ordinary had occurred. The scientist reeled jerkily toward his apparatus and switched off the power with a hand that moved stiffly as if unwilling to do his bidding. As the purr of the mechanism died down, he slumped into a chair and sat swaying weakly. His head raised slowly, agonizedly. A purple splotch was spreading from his temple to cover his cheek.

Wyatt recoiled from the face that looked up at him. "Lord, man!" he gasped, "what is it? Shall I get a doctor?"

Carr's lips were drawn back from his teeth with the intensity of his suffering; his eyes seemed suddenly to have sunk deep within their sockets. He made a desperate effort to speak but could not. Slowly he shook his head in negation, pointing a rigid finger to the receptacle in which lay the cat's-eye.

Understanding, Wyatt retrieved the stone, wishing fervently that he had never seen the thing. The very touch of it gave him a chill.

Still Carr was unable to speak, and the purple blotch was growing larger rapidly. He fumbled for a pencil and wrote painfully on the back of a notebook that lay on the table.

"Call Emory," was what he wrote.

Rousing from the stupefaction which had gripped him, Wyatt grabbed the telephone directory and started thumbing its pages. He knew that Emory had a place in Riverdale a spooky old house that was hidden from the road by a tangle of unkempt shrubbery. Wyatt had never liked the man, although he hardly knew him personally. And his

disappearances from civilization . . . his constant bickerings with his confrères . . .

The voice of the explorer came sharply over the wire.

Seeing that Carr was barely able to hold himself erect in his chair, Wyatt blurted out the story to Emory in a single muddled sentence. A shout greeted his words.

"You have the stone then!"

Wyatt snapped: "Yes, but what about Carr? The devilish thing has got him in a bad way. Shall I take him to a hospital?"

"No, no!" Emory's voice was almost panicky in the receiver. "Keep your shirt on, young fellow. He'll be all right; just bundle him into a cab and bring him up here."

Although this was far from reassuring to Wyatt, Carr nodded when he asked whether he was agreeable to the proposal. After that it was the work of but a minute to get the afflicted scientist into the street and ensconced in a taxicab.

The ride up Riverside Drive and out past the city limits was a nightmare. Carr made ghastly, inhuman noises in his throat and his body was attacked by a series of violent twitchings like those of a man in an epileptic fit. Several times Wyatt was tempted to stop the cab and call for an ambulance, but each time the scientist was able to make his objection understood by unintelligible croakings and agitated jerkings of his head. The hideous purple now covered his entire face and the sunken eyes had swollen completely shut. He was in a pitiable state and Wyatt raged inwardly as he saw the driver's grin reflected in the rear-view mirror. Although it was only natural that the fellow should think Carr was drunk.

Eventually they reached the dilapidated old mansion where Emory made his headquarters on the rare occasions when he was in America. An air of decrepitude and decay hung about the ancient frame structure; its tumble-down gables and crazily askew shutters proclaimed grossest neglect. Yet the explorer-scientist was reputed to be a wealthy man.

By this time Carr had lapsed into a semi-conscious condition and Wyatt had considerable difficulty in getting him up the rickety steps to the porch after discharging the over-inquisitive taxi man. His temper was none too good as he called out loudly for Emory.

The explorer appeared at the door in his shirt sleeves, a stocky, middle-aged man with a fiery red beard that bristled with intolerance and arrogance.

He said: "Ha!—stout fellow. Bring him right in. But where's the stone?"

"STONE!" exploded Wyatt. "You just forget that now and give me a lift with Carr. So help me, you'll pull him out of this or——"

Emory made haste to lend a hand and they brought Carr through an ancient oak-paneled hall and into a laboratory whose wealth and excellence of equipment seemed utterly incongruous here. When they had the suffering scientist stretched on a divan, Emory compounded a potion from several colorless liquids and poured it down his throat. Carr's body relaxed immediately and he fell into a natural sleep.

The explorer's gaze measured Wyatt contemplatively. "I've seen you somewhere before this?" he inquired blandly.

"Yes, once or twice. Union League Club." Wyatt jerked his thumb in Carr's direction. "How about my friend?" he asked shortly.

Emory glowered. "He'll sleep about an hour—ah—and then be as good as

new. But, tell me about the stone. You have it?"

"That can wait until Carr comes to."

"Ha!" The explorer's bushy red brows drew together in anger, then he got control of himself. "There's a check for a thousand in it," he reminded Wyatt.

"It can wait." For a moment Wyatt thought Emory would spring at his throat and a feeling of exultation surged up within him. In the mood which had come over him he would have welcomed the encounter. Then he saw the thick biceps relax under the man's shirt.

"Very well," said the explorer with obviously feigned indifference. "I'll leave you to watch over your friend, who, by the way, is a friend of mine as well. I have other things to do."

He strode out of the rom without so much as a backward glance.

WHEN half an hour had passed, Wyatt saw with relief Carr's normal healthy color was returning. The swelling of his eyes had abated and his breathing was easy and regular. It was evident that he would soon recover.

Thinking the matter over more calmly now, Wyatt regretted his antagonizing of Emory. He would have preferred talking with the man about the mysterious stone that was in his pocket and about the queer missile which had stricken Carr. Without doubt there was a connection between it and the cat's-eye; there was some secret known to Emory and which Carr had glimpsed in the depths of the weird stone when he had it in the radio microscope. More than one questionable happening had followed that stone . . . the panhandler's possession of it and his strange death in the street . . . the two thugs who had escaped the police . . .

Wyatt walked out into the hall, fingering the cat's-eye in his pocket. It was icy-cold to his touch and he relinquished it with a new shiver of distaste. He could not have explained why he had not flung the thing away long before this. Suddenly finding the air close and fetid inside, he ambled out upon the porch.

A soft voice hailed him from the shrubbery.

He caught a glimpse of a small round face with frightened eyes under a wind-blown mass of golden hair, then the vision was obscured by the dense leafage. He plunged into the shrubbery on the instant.

A girl, whose like he had never seen, only in a garment of some shimmering stuff that scarcely hid the outlines of her superb figure, she was like a wild creature of an alien jungle. Obviously of another race, small in stature and with skin like old ivory, birdlike in her poise, she seemed about to run off through the underbrush like a startled fawn. Her eyes, wide and clear, were of the deepest violet. Not blue; violet —and flecked with glints of gold. Wyatt's heart skipped a beat.

"Please," she said in agitated tones, "please to make way with the stone. To the old man I give it, that he might dispose of it before the time is too late. Now you have returned it here. Oh, I ask of you, please to destroy it."

There was tragic earnestness in the plea—nameless fear.

"But why?" stammered Wyatt. "How did you know I had it?"

"I—I know. There are others who seek it. And you must——"

She was interrupted by a call from the house. It was Carr, his voice vibrant with suppressed excitement. The girl slipped off into the tangled shrubbery and was gone.

For a moment Wyatt stood speechless, hardly believing he had seen and

heard aright. Then, awakening to reality, he answered his friend's call. "Coming," he sang out. But in that instant he decided to say nothing about the girl, at least for the time being.

Carr was standing on the porch with Emory, looking as if nothing had happened to him at all. His lean cheeks were flushed and he was fidgeting with impatience.

"Make it snappy," he urged. "And give me the stone. There's a big thing here—in the laboratory."

Wyatt saw the gloating in Emory's mien but handed over the cat's-eye without a word. If Carr said a thing was all right, it was all right. Besides, he was glad to be rid of the stone.

The two scientists dashed through the hall and into the laboratory, Wyatt following at a more leisurely pace.

WHAT next ensued was utterly incomprehensible to the man who knew all about automobiles and internal combustion engines, but who had never delved into the intricacies and mysteries of physical science. Wyatt was amazed at the enthusiasm of the two scientists as they fingered the cat's-eye and discussed subjects that seemed entirely foreign to the thing they were examining.

They talked of the fourth and fifth dimensions, of the possibility of two objects occupying the same space at the same time due to difference in the constitution of matter and the reversal of direction of electronic revolutions, of the existence of a world within a world, and of planes of vibration. They spoke of unseen realms and the nearness of creatures that existed but were not perceived by the senses, and then they placed the cat's-eye in a clamp that was between two huge spheres of a complicated electrical mechanism.

Wyatt heard what they said dimly, but it made little impression on his consciousness. He was thinking of the girl in the shrubbery and of her obvious fear. Of her strange beauty.

Carr seemed as excited as Emory; he talked incessantly, ignoring Wyatt in his intense interest in the answers given to his questions by the explorer. Then both scientists fell silent as the rising whine of a generator somewhere in the house resounded through the laboratory.

Wyatt looked at the cat's-eye where it was held in the clamp. It seemed to him that the thing glimmered suddenly with a new and unholy light, that it blinked knowingly and evilly as if set in the head of a cunning and vicious feline.

And then a small figure dashed into the room and flung herself toward the now humming mechanism. It was the golden-haired girl of the bushes.

Emory shouted angrily, "Ayra!" and rushed in to intercept her.

Her objective was not long in doubt; it was the glittering stone which had seemed of such importance to so many people. She hurled her body between the two spheres of the machine and snatched at the cat's-eye with trembling fingers. It was held fast by the clamp and she tugged desperately to wrench it free.

"Ayra!" Emory shouted again, and this time his voice was a throaty bellow. He grasped the girl's arm, but she tore it free of his grip.

Carr stood watching as if stupefied.

Then Emory shook the girl violently, growling and cursing. She resisted him valiantly, her eyes ablaze with fury. The explorer struck her resoundingly with the flat of his hand.

That was too much for Wyatt. In one stride he reached Emory and yanked him away, whirled him around. The explorer was quick and was a

powerful man; he drove a massive fist into Wyatt's mid-section, momentarily winding him. Recovering, Wyatt drove in a right that snapped the man's head back and rocked him to his heels, then followed with a left that started from the floor and caught the whiskered chin at precisely the correct angle. The explorer crashed in the midst of his apparatus and lay still.

The girl, Ayra, had paid no attention, but was still trying to work the cat's-eye free of its clamp. She sagged weakly as if about to collapse, and Wyatt circled her with his arm to support her.

Carr was shouting an unintelligible warning. There came a sudden spiteful whirr of the machine and a blinding flash. Clinging fast to the girl, Wyatt was buffeted by a force which permeated every fibre of his being and racked him with insupportable tortures. There was a warping of the very universe about him, a cataclysmic upheaval that flung him into a fathomless abyss of blackness.

He knew no more.

CHAPTER III

The Other World

CONSCIOUSNESS returned abruptly and painlessly. Wyatt lay for a moment collecting his senses. Overhead was a high dome; the room in which he found himself was circular in shape, windowless, and with walls of an unfamiliar bluish white metal. Beneath his sprawled body the floor was cold and hard, but on his breast reposed a soft burden. It was the girl Ayra.

He moved her head to his knee as he sat erect. Long lashes fluttered on the ivory of her cheeks, then they raised and those gold-flecked violet eyes looked up into his own. Terror came into them on the instant and the girl leaped to her feet.

Her glance darted in all directions like that of a trapped animal. Then she breathed a sigh of relief.

"For us it is most fortunate," she said. "None of them is here."

"Who?" asked Wyatt, staring stupidly. He saw then for the first time a pedestal that rose from the floor at his side. Rising, he saw that it held at its tip a replica of the cat's-eye which had been the cause of so much commotion. Disgusted, he growled: "Another of the blamed things, so help me!"

"It is the same stone," the girl averred, regarding it with new fear in her gaze. But this time she made no attempt to remove it from its mounting.

A derisive comment was on the tip of Wyatt's tongue. The same stone, she had said! But the words did not come; he could not find it in him to ridicule this girl who was so obviously in earnest and so greatly agitated. Even now she was tugging at his sleeve, her parted lips tremulous, her gaze beseeching.

She whispered: "No time there is to be lost if we are to preserve our lives. Come; Ayra show the way."

Nothing loth, for the silence of the place and the blinking of the cat's-eye gave him the creeps, Wyatt followed her. He was amazed to see a section of the seemingly solid metal wall slide away at a wave of Ayra's tiny hand, disclosing to view a long downward-sloping tunnel which was lighted by a dim rosy glow. Like the circular room, this passage was walled with smooth metal.

"Where in time are we?" he asked the girl as they entered the passage and the door closed silently behind them.

"In Idilna — my home. But please to hurry; the Keepers of the Stone may return and find us." Ayra grasped his hand and urged him onward as she sped through the tunnel.

"But——" Wyatt started to object.

"Hush, no sound must be made." The girl increased her speed.

There was nothing to do but follow in silence. It was utterly weird and impossible, the thing which had happened—that by some mechanical or electrical means he and the girl had been transported to this strange place. She had named the place, called it her home. Where was it? How had they arrived? Who was Ayra anyway? And what had the cat's-eye—the two cat's-eyes—to do with all this? Wyatt could only wait for the answers.

They left the main passage and entered one which was unlighted. Here the air was bad and the footing insecure, but Ayra moved with the assurance born of long familiarity with the way. Wyatt clung to the soft warm hand within his own, stumbling along blindly. It was the first time he had ever depended so entirely on a woman. And what a woman! The fragrance of her hair was in his nostrils. . . .

There were other dark passages—a maze of them. Endless wandering, it seemed. And then they halted at a blank wall. Wyatt heard the click of a latch and a door swung outward. They were in the open air, on a ledge that projected from the sheer wall of a cliff, hundreds of feet above the ground.

AN amazing scene was before them, an arid and desolate valley with rugged mountain peaks in the distance, with no sign of human habitation in evidence. The sky was leaden and a huge blood-red sun hung motionless at the horizon. Dust-clouds filled the air, a choking, powdery dust that held the odor of dissolution and decay. As Wyatt stared, a raucous shriek came out of the skies and a great gaunt creature winged its way from the cliff and swooped down into the valley. From wing tip to wing tip it must have measured twenty feet. A pteranodon!*

Wyatt turned inquiring eyes to the girl.

"It is Idilna," she explained simply. "My home."

"But where is it?"

"I know not." Ayra seemed lost in thought for a moment, but was quickly herself again. "Please to come at once," she begged. "From Ayrad, my father, you will learn more."

They moved along the ledge to a second door which opened into the rock. Beyond this there was an apartment whose windows—narrow slits cut through a three-foot wall of stone—looked out over the barren valley. Ayra called out in a strange tongue and with a catch in her ordinarily mellow voice.

An undersized but stalwart old man came in from an adjoining room, his face alight at seeing the girl. But, when his eyes rested on Wyatt, he stiffened and scowled darkly. A blur of harsh sibilants fell from his tongue and he advanced threateningly.

Ayra shook her golden head in negation, silencing the old man with words of his own speech, which, though imperiously delivered, held none of the harshness that had marked his enunciation. With not too good grace he moved to her side and pressed his cheek to hers in a barbaric sort of greeting.

"My father," smiled Ayra in Wyatt's direction. "That you were another stranger like Emory was his thought. To slay you was his wish, but I have persuaded him otherwise."

Perceiving that Ayrad's manner was still sullen, Wyatt was not so sure she had been successful. But he returned with a nod the deep bow of the old man and squatted before him on a mat provided by the girl. These people had

* A genus of pterodactyls, long extinct flying reptiles. Its name indicates that it had no teeth.

certainly quaint and primitive customs.

Ayrad spoke then in English, addressing his guest: "It is to me certain that you come from the land of Emree. What do you here in the company of my daughter?" His words were snapped out jerkily and his mien was haughty.

The girl drew in her breath sharply as she saw Wyatt stiffen.

"Perhaps your daughter can answer that better than I," he said curtly.

Ayra did answer, in a rush of breathless English that was as much addressed to Wyatt as to her father: "Of Emory's land is he, assuredly, but not of Emory's kind. Innocently he returned the stone to Emory after I had thought to lose it. But of Emory's plans he knows nothing at all. Besides this, my father, he came here unknowingly and without willing it. An accident it was, caused when he tried to protect me from the wrath of the fiery whiskered one. Please to know, oh Ayrad, that this man is good—and kind——"

The old man raised a hand, silencing her. His manner softened as he turned toward Wyatt. "I was mistaken in you," he apologized.

A thousand questions raced through Wyatt's mind, but he voiced none of them. Ayra had dropped her head on her last words and he was staring at its tumbled crown of gold.

As if in answer to Wyatt's unspoken thoughts, Ayrad commenced a long-winded explanation which soon had his guest's attention. The cat's-eye on the pedestal in that metal-walled circular room was, it seemed, an object of worship to Ayrad's people. It was sacred, as were its Keepers, of which Ayrad had been one until recently. Sacred indeed, for did it not mirror another world where godlike beings dwelt? Beings who resided in comfort and luxury, who rode the heavens in great winged machines of their own contriving, who had command of forces long lost to the knowledge of Idilnians.

Then Emree had come to them from this other world and they had at first looked upon him as a god. He had remained with them for a year, in Ayrad's household. That was how father and daughter had learned the language. But Emree had betrayed them and brought about their present exile. There were two races in Idilna, warring races, and this Emree, whom they had thought a god, had aligned himself with the enemies of Ayrad's people and planned the theft of a huge treasure from the Temple of the Stone. The plot discovered, Ayrad and Ayra were in disrepute, their lives forfeit. And so they had hidden themselves in this place. Emree, escaping to his own world, had been followed by two of the emperor's guards who sought his life as well as the stone that was in his possession. Ayra followed in an attempt to destroy Emree's stone and, by sacrificing herself, clearing her father of the suspicion which had come upon him. Incidentally, by making away with Emree's stone, would she not prevent the return of the red-whiskered one, who might be planning to come with reinforcements?

WYATT listened in amazement to the old man's dissertation. Some of his own questions had been answered, but not all. There was yet much about this business which was incomprehensible to him.

"It is the gateway between the two worlds, the cat's-eye," Ayrad went on. "Through it, this Emree pass from one to other, using the force we Keepers knew nothing of. In both worlds exist the stone and in either the force is effective."

All very confusing to an automobile dealer. Wyatt lighted a cigarette and flipped the match through one of the

window slits with an unerring aim that brought a gasp of admiration from Ayra.

"But where *is* Idilna?" he demanded.

"Ayrad knows not." The old man shrugged helplessly. "But one thing we know—it is not like your world, it is dead world. Our sun stand still in sky, our heat gradually leave us. Vegetation die and beasts dying also—mankind die finally."

"Emory promised Lukha—our enemies—he will take them to his own world," Ayra put in. "This to bribe them, but he lie, I know."

Recalling certain unsavory rumors concerning Emory, Wyatt was not so sure that he had lied, and this opened up new possibilities. He scratched his chin uncertainly, thinking of some of the explorer's talk with Carr back there in the laboratory. Of their enthusiasm over the fourth and fifth dimensions and orbital revolutions of electrons, whatever these might portend. Of one realm existing at the same time and in the same space as another. It was all too fantastic and unreal, yet here he sat. . . .

There came an insistent banging at the outer door. Ayra paled, and her father rose to his feet, drawing a curious pistol-like weapon from the folds of his tunic.

ALMOST immediately the door crashed in and four husky guards were in the room. Ayrad's weapon twanged and a writhing shaft of milky substance darted to the breast of one of the intruders. Memory came to Wyatt of the thing which had stricken Carr down, but here the effect was different. The milky substance congealed instantly, covering its victim with a quivering mass of jelly that brought him to the floor in a squirming, helpless mound. It was horrible, that jelly, living protoplasm which absorbed swiftly the human food that was within its folds.

Another of the weird weapons twanged and Ayrad was down. Ayra screamed and rushed upon the guard who had fired, beating at his face with ineffectual little fists. Wyatt, who had been stunned by the suddenness and deadliness of the thing, went into action, his long arms flailing.

These men were of similar mold to Ayrad—short, stocky fellows with bulging muscles and massive shoulders. But they knew nothing of the art of boxing and were completely taken by surprise when Wyatt rushed them. The first went off his feet and crashed in a corner under the impetus of a hard-driven fist which made a sound like a breaking board, when it struck his jaw. The second fired his pistol, but Wyatt had his wrist in a grip that spoiled his aim. Milky protoplasm splashed the ceiling and dripped stickily, nastily. Having no organic substance on which to feed, it became inert.

But Wyatt had his hands full with this one. Ayra's cries were in his ears, driving him frantic, distracting him. And the guard had wound legs and arms around him in such a manner that he could neither use his fists nor wrench himself free. He resorted to an old trick, relaxing suddenly and slumping in the fellow's arms as if yielding. In that moment his antagonist was off guard and off balance, releasing his crushing grip for just the moment Wyatt needed. The pistol changed hands swiftly and came down with a crunch on the guard's skull.

The one who struggled with Ayra, yelled when he saw his only remaining ally fall, released her and turned to flee. Wyatt shot him down without compunction, albeit he shuddered at the avidity of the ghastly living shroud that enveloped him so speedily.

Ayra, bruised and sobbing, was glad for Wyatt's supporting arm. Gently he

drew her from the room of sudden and wholesale slaughter.

CHAPTER IV

Emory's Return

IN an adjoining chamber, Wyatt waited until the girl had regained a measure of composure. Finally her sobbing ceased and she looked up at him expectantly. Not once had she spoken of her father's passing, but those violet eyes were eloquent of grief.

"How do we get out of here?" Wyatt asked her.

"No way there is but through the Temple of the Stone." The girl's tone was dubious.

A sudden thought came to Wyatt. "How did you get to my world in the first place?" he inquired. If return were now possible, it would be the easiest solution of her difficulties.

Ayra brightened. "Unknown to the Keepers, this Emory had put a machine in the pedestal of the Stone. When accused by the emperor, Ayra revealed this to him, and thus it was his guards did follow the red-whiskered one. Ayra escaped after that and she, too, followed in such manner. If but the machine remains——"

"I'll gamble it does. Let's go."

Ayra's gaze dropped to her garment and hot color flooded her cheeks. It was torn almost to shreds from her struggle with the guard, revealing startling the ivory creaminess of her skin.

"I—I must change my robe," she faltered.

Wyatt chuckled. "Make it snappy then," he urged.

After she had gone from the room he strolled into the chamber of death they had left. Only two bodies were there, those of the guards he had fought with his hands. Both had died instantly. Of the others or of the jelly which had overcome them there was no sign. Whether the devilish stuff had crawled away after feeding or whether it had itself been consumed in the consuming of its victims, he could only conjecture.

A sound rang through the apartment, the crash of an overturned object in some distant room. Genuinely alarmed, Wyatt barged through the place, calling for Ayra as he ran. There was no reply.

He had thought that the door through which they had entered was the sole entrance to the hideaway, but certainly the girl had not gone out that way, else he should have seen her. As certainly, she was not in any of the rooms.

Cursing himself for a fool, Wyatt came to the grudging conclusion that Ayra had deceived him, that she had deliberately left him to his own devices in a place that would soon be swarming with foes. But a more careful search of the place unearthed evidence to the contrary. In a dark corner he found a shred of clothing amidst the fragments of what had been a large urn. There had been a struggle then. Another shred of filmy material apparently embedded in the wall at a point waist-high from the floor indicated the existence of a secret panel. There was another exit.

Wyatt felt carefully along the wall until his fingers encountered a spring. The panel slid back noiselessly and he was in a passage like those through which the girl had brought him here. Clutching the dead guard's pistol, he felt his way cautiously through the blackness.

His mind no longer seethed with doubts and questionings. It did not matter now where Idilna was located, what sort of a world he was in, nor how he had arrived. All that mattered was Ayra. Finding her and getting her out of this mess became his sole concern.

Once he thought he heard voices ahead and he increased his pace only to come

up against the dead end of a passage. He retraced his steps and went into a branch passage where the going was easier. This sloped upward and soon he saw a dim light ahead. And then he was in a lighted tunnel, one that he recognized. It was not far to the circular room of the cat's-eye.

Reaching the door at the end of the passage, he pressed his ear to the smooth metal. The rumble of an angry voice came from beyond—the voice of Lute Emory!

A SWIFT search of the moulding disclosed the spring which released the door. It slid back, revealing a strange tableau in the circular room. Emory and Carr stood by the pedestal which held the stone, and facing them was a much disheveled Ayra, who was between two most hideous man-creatures. Emory was berating the girl in no uncertain terms.

These beings who guarded Ayra were in nowise similar to her father or to the guards Wyatt had seen before. They were tall and gaunt, red skinned, and naked save for loin cloths of some glittering woven stuff; their heads were enormous, totally bald, and globular in shape. They had no ears, but, instead, great round diaphragms set flush with their skulls and stretched tight like drumheads. Almost transparent, these diaphragms fluttered under the impact of Emory's voice waves.

Carr was watching in a dreamy sort of way, apparently unmoved.

"What's the big idea?" Wyatt demanded wrathfully, edging in between Ayra and the explorer.

Emory's face purpled; he seemed on the verge of apoplexy. But Carr nudged him and the explosion that had been imminent expended itself in a mere splutter. "Ha!" he growled. "Hardly expected to see you yet, Wyatt. Hm! But you keep your shirt on, young fellow, and don't butt in on this until you know what it's all about. Carr here has thrown in with me and I'll have an offer for you presently. In the meanwhile I'll deal with this hell-cat, Ayra, as I see fit."

Wyatt restrained himself at what he thought was a warning signal from Carr's gray eyes. "You'll not harm her," he offered. Nevertheless he was puzzled by the entire proceeding, surprised that Carr had cast his lot with Emory in a deal so obviously shady. Or had he?

"No, she'll not be harmed," the explorer rumbled. "Only kept under restraint during the revolution.

Revolution! Wyatt realized then that these gibbous-headed monsters with Ayra were of the Lukha, enemies of her people and the allies of Emory in his plottings. Sounds of strife came faintly through the metal walls, and he knew now why he had seen none of the Keepers of the Stone.

"He lie," the girl averred stoutly. "Well he knows the Lukha will slay Ayra so soon as he departs with what he came for."

"You'll release her, Emory," said Wyatt grimly. "I'll look out for her, not these skinny apes, so help me."

The explorer laughed raucously. "So you fell for the little trollop," he sneered.

Wyatt saw red and his long arm shot out like a flash. But this time Emory beat a swift retreat, dodging behind the pedestal. In a fury he bellowed: "I've had enough of your interference. Take him away, Lukha—take the girl, too!"

Ayra cried out in fear or in pain, he could not tell which, but it was enough to goad Wyatt into a wild lunge over the pedestal. Carr's attempt to restrain him went unnoticed. But vicious triumph was in Emory's leer and Wyatt never reached him, for he was halted midway in his rush by a pair of wiry arms which

encircled him and pinned his own arms to his sides.

He was in the grip of one of the Lukha and it was impossible to squirm out of that steel-muscled embrace. Others of the red men came from nowhere, seeming to spring up from the very floor, and he was carried, kicking and struggling vainly and ignominiously, carried one moment and dragged the next, until the circular room was left behind. The sound of Emory's laughter died out in the distance.

Eventually, bruised and sore, he was dumped into a narrow cell and the door clanged shut behind him.

RUEFULLY, Wyatt surveyed his surroundings. The air was stagnant in this place, and the floor was ankle deep with indescribable filth. Its sole article of furniture was a long metal bench which must serve as seat or couch. The grilled door was securely locked and the only light came through a four-inch slit in the metal wall, a slit that rose from the level of his shoulders to the ceiling some three feet above. Through this opening filtered the din of combat.

Wyatt moved to the opening and sniffed the outside air, finding it but little better than that in his prison. But from this place he had a restricted view of what was evidently a public square, a broad plaza with a tall monument in its center and flanked by conical buildings whose lustrous metallic walls reflected the dull red of the motionless sun in sombre and eery shades. Patches of light at the tips of the cones made of them huge poniards whose points had drawn human blood.

And human blood was being spilled in the square below. Hundreds of Lukha swarmed over the area and they were battling the shorter and stockier Idilnians with wicked curved blades which rose and fell with deadly accuracy. The defenders, outnumbered many times, fought valiantly and occasionally victoriously. But quarters were too close and their own forces too disorganized for effective use of their protoplasm pistols. There could be but one outcome.

Fuming helplessly, Wyatt left the aperture and hunched his aching body on the bench. One thing was sure—Carr was not in this thing with Emory, not as an ally. He had come to this nightmarish place with the explorer under that pretext, but actually because he was the kind who would never desert a friend who was in difficulties. Wyatt knew Carr of old; even now that fertile brain of his had probably concocted some scheme to get them out of this. But the getting out was likely to be a slow and dangerous process, for Carr's scientific bent was sure to keep him on the scene as long as new discoveries were to be made.

Piecing together the bits of information given him by Ayra and her father, Wyatt could only conclude that Emory had carefully organized this raid of the Lukha and timed his return to coincide with it. That was why he had been so anxious to get his hands on the cat's-eye, though it was still not at all clear to Wyatt how the weird stone fitted into the picture. If there was a treasure Emory expected to get for himself, he would make sure that no one else shared it. His promises to the Lukha would mean nothing; he would find some way of double-crossing them. Quite likely he planned to double-cross Carr as well.

As for Ayra—Wyatt's throat constricted when he thought of her. He had not the least idea what they had done or would do with her, and certainly there was no help for her to be obtained from Emory.

Wyatt's hand encountered a hard object in his pocket. It was the pistol he

had taken from the guard; luckily the Lukha had not frisked him. He examined it curiously and found it to be a simple enough arm, operating by compressed air and containing eight grayish-white pellets in its magazine. These were the missiles which released the deadly protoplasm. He replaced the weapon in his pocket gingerly; it might be that it would come in handy later.

A sudden increase in the din outside cut short his reflections and brought him again to the narrow window. The fighting out there had ended and in the corpse-strewn plaza not one of the white-skinned men of Idilna remained on his feet. Only the hideous big-heads were left, and these formed a howling, milling, triumphant mob. In their midst was Emory, grinning evilly and shouting approbation. Carr was not with him. Wyatt's stomach went suddenly hollow and he returned to his bench.

"PSST!" The sound was barely audible but was repeated, more loudly this time: "Psst!"

Wyatt raised his head and looked directly into the smiling gray eyes of Addison Carr, who stood on the other side of the grilled door. A key rattled in the lock.

"Dog-gone!" exulted Wyatt. "I knew you'd be here."

"Hanged if I thought I would. I had to do for the fellow with the keys and he was a tough customer." Carr had the door open now, and Wyatt saw that he was bleeding freely from half a dozen gashes about the head and arms.

"Emory's completely nuts," he grunted then.

"And then some; I saw him in the square."

Carr glanced at the narrow window. "An odd thing, that," he drawled. "He doesn't realize what he has let loose. But while he is celebrating we'll have a chance to do something."

"Meaning what?"

"Why, thousands of these killers will be streaming through into New York. It's our job to prevent it. If——"

A confused murmur was heard in the corridor and immediately it was filled with men, the white-skinned folk of Idilna. A number of them halted at the open door of the cell. Wyatt drew the pistol from his pocket.

"Hold on now," whispered Carr. "Let's see if we can arbitrate."

He faced the Idilnians with hands extended to indicate peaceful intentions. Wyatt, not without reluctance, followed him into the corridor. The two were surrounded at once and hustled along by the press of gibbering, undersized creatures.

CHAPTER V

Keepers of the Stone

THEY passed many barred cells in the corridor and Wyatt tried to peer into each one, hoping to see Ayra. Efforts to communicate with the Idilnians were of no avail, as there seemed to be none among them who understood his words. He saw Carr ahead, waving his arms, doing his best to convey some understanding to one who seemed to be leader. But there was no indication that he was succeeding.

It was impossible to know whether those about them were friendly or inimical, as they presented countenances that were devoid of expression. They appeared to be unarmed and wore scarlet robes that hung to the floor.

Finally, in mounting impatience, Wyatt grasped one of those nearest to him and brought him to a stop by one of the cell doors. He pointed through the grill and repeated: "Ayra—where is she?"

The Idilnian's eyes lighted with comprehension, then became crafty. He jerked himself free of Wyatt's grip and fell back in the procession to jabber excitedly with a comrade. Wyatt gave it up after that.

Presently they emerged in the circular room of the cat's-eye, where possibly fifty of the red-robed Idilnians were assembled. At the side of the pedestal stood one who was taller and of even more dignified bearing than the others. Wyatt and Carr were led before him.

"You be friends of Emree," he intoned without expression.

Carr replied feelingly: "Not friends, no. Only countrymen."

"Then you help defeat Emree and Lukha." It was not a request but a command, and uttered in tones that brooked no argument.

After what he had seen, Wyatt was more than willing. He saw Carr nod agreement, but could not resist demanding: "Where's Ayra?"

The spokesman of the robed Idilnians frowned. "Of more importance this," he droned tonelessly.

He raised his hand and an awed silence fell on the assemblage. The hidden lights dimmed and the Idilnians fell to their knees in a circle which enclosed the pedestal, their eyes raised to the great dome overhead. Wyatt, looking furtively at the cat's-eye, saw that it was aglow with a fitful and eerie radiance.

This was a ceremony, these were the Keepers of the Stone.

The silence lasted several minutes, then was broken by a low chant that came from the throats of the kneeling ones. Seeing that the eyes of the worshippers were not closed but wide and staring, Wyatt craned his neck to peer into the depths of the dome above them. Immediately he was lost in wonder.

Pictured there on the inner surface of the dome, projected from the flickering cat's-eye as if from the lens of a motion picture machine, was a swiftly changing panorama. The tall buildings of lower and midtown Manhattan passed in review, the ships of the harbor and river, a great dirigible soaring high over the Palisades. Closer views of the streets, dizzyingly swaying; men and women walking; surface cars, trucks and taxicabs in the usual rush of mid-day traffic.

The chanting of the Keepers rose to a high pitch of enthusiasm, then broke off on a note of expectancy as the normal illumination of the chamber was restored.

"You have seen," said the one by the pedestal. "To us are these gods, these like you and like Emree. But Emree we learn to be evil spirit. Already have he cause Lukha to slay more than half of those our people. Already have he steal treasure from temple beneath. He shall die and you, his countrymen, shall assist."

Switching to his own tongue, the chief Keeper addressed his cohorts sharply. They dispersed immediately, going out through numerous doors which opened in the metal wall. When the circular room was empty save for the two New Yorkers and the chief Keeper, the doors closed.

"Very soon now," the Keeper intoned. "Very soon come Emree and his murderers to take riches of temple to your world. But we prevent. He know powers of Stone we not know, but Keepers know other powers."

A pencil shaft of orange radiance stabbed down from the dome and impinged on the cat's eye, making of it suddenly a thing of dancing flame. Pulsing rhythmically, it filled the air of the room with a vibration which caused the skin to creep and hair to rise on end.

Wyatt could see from Carr's expres-

sion that he, too, was puzzled by the phenomenon. And more than a little disturbed.

ONE of the metal panels slid back and Emory burst into the room shouting. A score of the Lukha followed him and each of the monsters bore on his shoulders a bulky sack. The chief Keeper stood regarding them with impassive mien, arms folded across his breast.

Seeing Wyatt and Carr, Emory went beserk with rage. "Ha!" he bellowed. "A fine sneaking pair you are. And now I have you where I want you."

A heavy automatic appeared in his hand, a weapon strangely out of place in these surroundings but none the less deadly. Its muzzle raised slowly and a grin of anticipation spread over the red-whiskered face above it. But before he could press the trigger living fire spouted from the cat's eye, bathing him from head to foot in a ghastly flickering illumination. The pistol clattered to the floor and Emory shrieked with pain.

But he seemed to be unsinged as the flame receded, only gripped by a strange paralysis that contorted his features and cramped his limbs into grotesquely twisted members. Some weird energy from out the cat's eye. . . .

Emory slumped to the floor and lay there writhing. "Kill them!" he babbled. "Kill the Keeper. Kill all three, I say!"

But flame spouted anew from the tip of the pedestal and the Lukha were stricken down as had been their leader. The bags they carried fell from helpless fingers.

The chief Keeper yelled exultantly and the room swarmed with his cohorts, who streamed in from their hiding places. They gathered the sacks into a heap at the base of the pedestal. Wyatt gasped as one burst open, releasing a glittering trickle of precious stones.

Two of the robed Idilnians dragged Emory to his feet and brought him before the chief Keeper. The flame of the cat's-eye had died down to a mere smoulder and he seemed to be recovering from his incapacitation. He snarled defiance.

Unmoved, the chief Keeper said: "Now Emree you see other powers of the stone. You see treasure of temple forever lost to you or your kind. Then you die."

Once more the flame struck down from the pedestal's tip, this time with a furious roaring and a white heat. The pile of bulging sacks melted away under its fury, leaving only a blackened area on the metal floor. Emory cursed and raved like a madman. He was hurled back among the jabbering, partially paralyzed Lukha by the two Keepers who held him.

"And you," said the chief Keeper, turning to Carr and Wyatt. "You die with Emree."

Wyatt fingered the protoplasm pistol in his pocket undecidedly.

"Hold on, now," Carr said placatingly. "We are no enemies; we've done nothing——"

"Enough! You came here with Emree; with him you die."

Palming the heavy pistol, Wyatt struck out at the Keeper. Had the blow reached him he would have been felled like an ox. But it did not reach him, for a blinding light leaped up from the cat's eye and flung Wyatt back among the fallen Lukha. Excruciating agonies ran through his veins as if his blood had turned to molten metal; a red film blotted out his vision; his muscles refused to do his bidding.

Dimly he heard Carr's shout of anger and the ensuing scuffle. A confused

babble of sound followed, and the red film cleared away. He saw that fresh numbers of the Lukha were crowding into the room, that a furious fight was raging. The red-robed ones fought with short swords they had drawn from under their draperies, the Lukha with the wicked curved knives he had seen them use in the square. The chief Keeper stood calmly by the pedestal of the cat's-eye, watching for a chance to release its energies against the enemies of his people. But his followers were so inextricably mixed in with the attackers that it was impossible for the time to distinguish friend from foe.

FINDING his strength returning, Wyatt drew himself up on one elbow, then to his knees. Carr was beside him, groaning, but gamely fighting the paralyzing energy which had him in its grip. Emory, crawling near them, hissed: "The pedestal, fellows. If they get me, try and start the generator in its base. You get back. Sorry——"

A dying Keeper staggered against him and the two went down in a heap. Wyatt remembered what Ayra had said about that generator and he struggled to his feet, pulling Carr with him. He still had the pistol. Clubbing it, he struck down a Keeper who swung at them with his sword. Then steel bit into his shoulder from another quarter and he was forced to release his hold of Carr and fight for his life.

Pandemonium reigned in the circular chamber. The fighters surged this way and that, and Wyatt found himself battling Lukha and Keepers alike. Then he saw before him a robed one whose face seemed familiar; it was the one he had halted by the cell and spoken to of Ayra. The girl was with him. Whether with friendly or malicious intent, the Keeper had sought her out and brought her to this place of death.

Wyatt went cold with horror. "Get her out of here!" he yelped.

"NO, no!" the girl begged. "Please to let Ayra stay; she help."

Before Wyatt could prevent it, she had wriggled her small body through the bloody press and miraculously reached the pedestal, where she faced the chief Keeper. Wyatt battered in a bulbous head which came up before him under a blade that never completed its arc, and fought his way to her side.

She was arguing in her own tongue with the chief Keeper but his compressed lips and unyielding countenance showed that he had no thought of giving in to whatever it was she was requesting.

At that moment a group of Lukha rushed the pedestal and the chief Keeper was swiftly victim to the vicious thrust of a curved blade which passed entirely through his body. Wyatt brained his assailant with the butt of his pistol, drawing Ayra into the protection of his left arm as he swung at the others with his right. The robed one who had brought her leaped into the fray with sweeping short sword, decapitating two of the Lukha before he was slain. Wyatt snatched up a dripping curved blade from the floor and wielded it to good effect.

It was a nightmare, this struggle in the room of the Stone. The shaft of orange light still struck down from the dome and the cat's-eye, bathed in its luminescence, was a living, gloating thing, watching the carnage, seeming to wait for an opportunity of its own.

Carr had managed to reach the pedestal and was working swiftly through a door which he found in its base. Thrusting the girl behind him, Wyatt kept his blade whistling in a sweeping arc which held back the nearest of their attackers. He saw Emory rise up howling and bowl over Keepers like nine-

pins. He too was making for the pedestal and the Lukha were defending him.

A sharp cry from Ayra warned Wyatt of danger behind and he wheeled in time to catch on his own blade a descending short sword meant for Carr. He impaled the Keeper who wielded it.

And then a humming commenced within the pedestal, rising higher in pitch until it grew to a shriek. The hubbub of fighting was lulled as the orange light-shaft from above flashed out with a thunderous roar. Mighty energies had been in conflict, forces beyond human comprehension, and the one in the pedestal had triumphed.

Lukha and Keepers, hitherto engaged in mortal combat, ceased their efforts to stare open-mouthed toward the pedestal. The cat's-eye blinked wisely in the midst of a growing blue radiance which seemed to be a tangible substance. A prickly sensation crept up Wyatt's arm as the light bathed his flesh and he recoiled from it instinctively.

Carr rose up and grabbed him. "Stay here," he said. "Inside the sphere of its influence."

Wyatt ducked into the swelling blue light-bubble with Ayra and was immediately shot through and through with vibratory energies that were more exhilarating than otherwise. There was a sharp tang of ozone in the air he breathed. The radiance was all around him.

Recovering from their astonishment, Keepers and Lukha made a concerted rush for the pedestal. Immediately the fighting was resumed.

"Hold it, Carr!" shouted Emory. "The lever just beneath the tip. Move it forward."

Wyatt saw Carr fumbling with the lever; saw the battling Idilnians surging nearer; saw Emory, a blood-smeared demon, swinging a Lukha knife with deadly rhythm. Indiscriminately now, he fought Lukha and Keeper. Then a blinding light shut out the view.

Again there was the wrenching of the very universe about Wyatt, a tremendous thump as of the blasting asunder of the cosmos. The rush through infinite space in utter blackness, the physical torture came next.

But through it all there was the comforting knowledge of Ayra's warm body pressed close to his own.

CHAPTER VI

Nemesis

THIS time he did not lose consciousness, but, reeling drunkenly, came suddenly to the realization that he was in Emory's laboratory. So tightly was he holding Ayra that she whimpered softly in the semi-coma into which she had fallen. He moved her to one of Emory's deep armchairs and disposed her comfortably there.

Carr was hanging on to one of the supports of Emory's apparatus, looking dazedly at the cat-eye where it reposed in the clamp between the two huge spheres. Seeming to be identical with the one they had left behind in Idilna, the uncanny thing blinked eerily.

"Say!" Carr croaked. "Do you see what I do?"

Wyatt growled, "Yes," and pounced on the stone. The ill-omened thing would bring no further destruction; he'd tear it from the clamp and smash it. Bury it—anything to get it out of the way.

"Hold on, now," drawled Carr. "There's Emory back there; he may fight through, poor devil. He didn't know."

"That's right." Wyatt let his fingers fall from the clamp and stepped back from between the spheres.

Then he saw the two who were watching them. Squat, wide fellows in the

garb of civilization, they were undoubtedly Idilnians.—the two guards sent by the emperor, the "thugs" who had followed the old panhandler in Emory's car after Ayra had given him the cat's-eye. Each of them held a protoplasm pistol.

"Stand back," one of them commanded.

Wyatt's hand moved toward his pocket but dropped abruptly as one of those wicked looking pistols came up sharply.

"No resistance!" snapped the Idilnian. "Else you die. It is but to obey the emperor's word we are here."

For a long space no one moved or spoke. The silence was fraught with unuterable menace. Wyatt fidgetted, shifting his weight from one foot to the other. And then he was aware of a sound like the purring of a feline, a sound that rose and fell but always seemed to emanate from the winking cat's-eye.

"Confound the thing!" he muttered. "It's got me dotty."

Darting a sidewise glance in Carr's direction, he saw that he too was staring at the yellow stone as if hypnotized, and his long fingers running nervously through his rumpled and blood-matted hair.

Ayra sighed and rose weakly from her chair.

One of the Idilnians barked: "sit down!"

Without protest she subsided.

Still nothing happened. Then Wyatt scratched his chin, looking over at Ayra, who had slumped into the chair and sat stoically waiting. Her eyes were wide but unafraid. Violet eyes, flecked with gold. More loudly still came the purring sound from the vicinity of the cat's-eye. Wyatt lighted a cigaret and flipped his match into the fireplace. The muzzle of a protoplasm pistol swung toward him at the movement. Still nothing happened.

Then the floor heaved to some unnamed and unnameable force. From the cat's-eye came a hissing sound, and with it a blue-lit, vaporous emanation that formed into a perfect sphere which rested on the base of the mechanism of the two spheres. Came a tremendous jarring of the place and the blue light vanished.

STAGGERING toward them was Emory, blinded, hacked almost to ribbons, but alive! "Ha!" he gloated. "I licked 'em."

The Idilnian's pistols twanged simultaneously and two milky blobs of protoplasm splashed on the explorer's bare chest. Cursing and shrieking horribly, he tore at the jelly-like stuff with his hands, but was borne quickly to the floor, his cries smothered. The emperor's guards had not waited in vain.

Sick with horror, Wyatt averted his gaze from the writhing mound of white. The two Idilnians were backing toward the apparatus of the two spheres, their pistols covering their retreat.

Divining their purpose, Carr yelled: "Don't touch the controls! It's sure death, with the machine in Idilna running at the same time."

"The word of the emperor must be obeyed," answered one, grimly.

Still threatening with their pistols, both moved in between the spheres, flanking the clamp which held the cat's-eye. The light in the uncanny stone seemed to flicker with renewed vigor as they did so. In its stare was ghoulish anticipation.

One of them reached for the starting switch and there came the whine of the hidden generator. Dazzling flame bathed them for an instant and was snuffed out with a blast of heat so intense, as to drive the watchers to the far side of

the room. Molten metal dripped from the spheres and these sagged down into shapeless lumps; where the two guards had stood was nothing but a smouldering mass. A second flash from the apparatus itself was accompanied by a cloud of black smoke, and the odor of burning insulator filled the room. The whine of the generator ceased abruptly.

The cat's-eye had been consumed in the white heat of the released energy, or at least was fused into the melted material.

"And that," Carr said regretfully, "is that."

Looking once more at the rapidly shrinking mass of protoplasm on the floor, Carr took the pistol from his pocket and tossed it into the pool of molten metal where the spheres had been. With satisfaction, he saw it sink into the mass and disappear.

Ayra was sobbing softly.

"I'll gamble that's the end of Idilna," Wyatt whispered to Carr. "And she knows it, poor kid."

The scientist nodded solemnly. Then his gray eyes twinkled. "It's the end of your thousand bucks, too," he grinned.

AN hour later, having cleansed and bandaged their wounds, the two men sat in Carr's living room. Ayra, exhausted from her experiences, was curled up on the divan, asleep.

"Wish we could have stayed longer, at that," said Carr, his gaze far away, his fingers drumming the arm of his chair.

Wyatt said feelingly: "You would. You'll be walking around with a magnifying glass and a notebook when you get to the pearly gates. But I'm all-fired thankful we came out of it with a whole skin and that the cat's-eye is out of existence."

"I wonder if it is."

"Mean to say it survived that heat up at Emory's place?"

Carr answered thoughtfully: "No, I don't; it has ceased to exist in our plane, that's certain. But in other planes —I don't know."

"What's all this about planes and dimensions? Mind telling me some more about it?" Wyatt was risking exposure to one of those long scientific dissertations of the scientist's.

"You've seen the theory that our universe is five-dimensional, of course. Well, the fourth dimension is what we call space-time, the fifth is yet unexplored. But Emory called it, and I'm inclined to agree with his definition, the ratio of oscillation intervals. There may be many planes in this fifth dimension, each with a different rate of electronic motion and constituted of matter built up in an entirely different manner from that which we are familiar. Idilna might well be on one of these planes, separated from us only by its differing automatic makeup. The co-ordinates of space-time, time, now——"

Carr paused and reached for his slide-rule.

"Oh, I'll believe you," Wyatt put in hastily. "I'll believe that Idilna is anywhere you say or that atoms can turn inside out. But I want to know where the cat's-eye came in, and what you saw in your radio-microscope, and what happened between the time Ayra and I went through and the time you and Emory arrived."

Carr sighed and replaced the slide-rule. Wyatt knew he itched to get into a maze of involved mathematics.

"I saw Idilna in the stone, if you want to know," he said. "And evidently the etheric vibrations of the microscope beam were of such nature as to permit a partial connection between the two planes. I saw the Keepers of the Stone and they saw me. One of them fired a

protoplasm pistol and its charge came through, incompletely materialized in our plane because the getaway was not wide open. That's why the stuff acted as it did instead of killing me outright. Because of similiar experiences previously, Emory knew how to cure me.

"He came across the stone originally in some ruins he unearthed in Cambodia and discovered its reflections of Idilna by accident. Later, he developed an apparatus which altered the vibration characteristics of space around the stone and permitted him to pass between the planes. Emory told me these things after you and the girl had gone through and, naturally, I agreed to follow with him. The rest you know as much as I do."

"You believe the stone here was the same one we saw in Idilna?" Wyatt asked. "Existing in both places at the same time?"

"And probably in the same relative position in space, if Emory's theory is correct."

"WHAT about the tricks the head Keeper played with it?"

"Those, unfortunately, I'll never be able to explain." Carr's face was rueful as he said this. "And another thing puzzles me."

"What's that?"

"Have you looked at your watch?"

Wyatt consulted his timepiece, seeing that it lacked ten minutes of noon. "We've been away more than twenty-four hours!" he exclaimed.

"Not so you could notice it," said Carr. "We were in Idilna less than thirty minutes of our time."

Wyatt started. "So what?" he demanded.

"It means that the time co-ordinate of existence in Idilna is far different from ours. Time there passes much more rapidly. Idilna is on a planet which is of incalculable age; it has ceased rotating on its axis, as is evidenced by the fixed position of its sun in the sky. It may be it is our own planet—millions of years hence."

"Rats!" Wyatt guffawed noisily.

But the scientist was serious. "It's possible, at that," he insisted.

A new thought struck Wyatt and he glanced anxiously at Ayra.

It was Carr's turn to laugh. You needn't worry," he grinned. "She'll not become an old woman in a few weeks. Passing through to our plane has altered her make-up to suit her to the new environment. Otherwise, she could not have come through."

Wyatt did not reply. He was marveling anew at the fresh beauty of the sleeping girl.

"Wonder how she'll take to our way of living," Carr said softly.

"I'll do everything possible to make it pleasant for her, so help me." Saying this, Wyatt did not observe the twinkle that came into his friend's eyes, nor the look of something like envy, which replaced it so quickly.

Ayra stirred in her sleep, flinging out her arms in a beseeching gesture. "Jeem," she called plaintively.

Wyatt had told her to call him Jim. He was at her side in a single bound. In another moment those violet eyes were looking up at him from under dewy lashes.

Neither Ayra nor Wyatt took notice of the fact that Carr crept silently toward his laboratory, slide-rule in hand.

THE END

Triplanetary

By EDWARD E. SMITH, Ph.D.

CONCLUSION

Illustrated by MOREY

Our readers now bid farewell to Dr. Smith's friends and their interplanetary experiences. We say "friends," because though they are characters in fiction, the author has inspired them with true individuality and has made them read like characters in real life. Perhaps our readers will feel as we do—a little sorry to part with their company.

CHAPTER XI

Roger Carries On

FOR gray Roger had not perished in the floods of Nevian energy which had destroyed his planetoid. While those terrific streamers of force emanating from the crimson obscurity surrounding the amphibians' space-ship were driving into his defensive screens, Roger sat impassive and immobile at his desk. His hard gray eyes moved methodically over his instruments and recorders; and after a few minutes he smiled coldly, while an expression of relief struggled fleetingly to move his expressionless face. Even though his screens were better than anyone had supposed, why admit it?

"Baxter, Hartkopf, Chatelier, Anandrusung, Penrose, Nishimura, Mirsky . . . " He called off a list of names. "Report to me here at once!"

"The planetoid is lost," he informed his select group of scientists when they had assembled, "and we must abandon it in exactly fifteen minutes, which will be the time required for the robots to fill this first section with our most necessary machinery and instruments. Pack each of you one box of the things he most wishes to take with him, and report back here in not more than thirteen minutes. Say nothing to anyone else."

They filed out calmly, and as they passed out into the hall Baxter, perhaps a trifle less case-hardened than his fellows, at least voiced a thought for those they were so brutally deserting.

"I say, it seems a bit thick to dash off this way and leave the rest of them; but still, I suppose . . ."

"You suppose correctly." Bland and heartless Nishimura filled in the pause. "A small part of the planetoid may be able to escape; which, to me at least, is pleasantly surprising news. It cannot carry all of our men and mechanisms, therefore only the most important of both are saved. What would you? For the rest it is simply what you call 'the fortune of war,' no?"

"But the beautiful . . . " began the amorous Chatelier.

"Hush, fool!" snorted Hartkopf. "One word of that to the ear of Roger and you too are left behind. Of such non-essentials the Universe is full, to be collected in times of ease, but in times hard to be disregarded. Und this is a time of schrecklichkeit indeed!"

And through that terrific conduit came speeding package after package ***of destruction.***

The group broke up, each man going to his own quarters; to meet again in the First Section a few minutes before the zero time. Roger's "office" was now packed so tightly with machinery and supplies that but little room was left for the scientists. The gray monstrosity still sat unmoved behind his dials.

"But of what use is it, Roger?" the Russian physicist demanded. "Those waves are of some ultra-band, of a frequency immensely higher than anything heretofore known. Our screens should not have stopped them for an instant. It is a mystery that they have held so long, and certainly this single section will not be permitted to leave the planetoid without being destroyed."

"There are many things you do not know, Mirsky," came the cold and level answer. "Our screens, which you think are of your own devising, have several improvements of my own in the formulæ, and would hold forever had I the power to drive them. The screens of this section, being smaller, can be held as long as will be found necessary."

"Power!" the dumfounded Russian exclaimed. "Why, we have almost infinite power—unlimited—sufficient for a lifetime of high expenditure!"

BUT Roger made no reply, for the time of departure was at hand. He pressed down a tiny lever, and a robot in the power room threw in the gigantic plunger switches which launched against the Nevians the stupendous beam which so upset the complacence of Nerado the amphibian—the beam into which was poured recklessly every resource of power afforded by the planetoid, careless alike of burn-out and of exhaustion. Then, all the attention of the Nevians and the greater part of their power output devoted to the neutralization of that last desperate thrust, the metal wall of the planetoid opened and the First Section shot out into space. Full-driven as they were, Roger's screens flared white as he drove through the temporarily lessened attack of the Nevians; but in their preoccupation the amphibians did not notice the additional disturbance and the section tore on, unobserved and undetected. Far out in space, Roger raised his eyes from the instrument panel and continued the conversation as though it had not been interrupted.

"Everything is relative, Mirsky, and you have misused gravely the term 'unlimited.' Our power was, and is, very definitely limited. True, it then seemed ample for our needs, and is far superior to that possessed by the inhabitants of any solar system with which I am familiar; but the beings behind that red screen, whoever they are, have sources of power as far above ours as ours are above those of the Solarians."

"How do you know?"

"That power, what is it?" "We have, then, the analyses of those fields recorded!" Came simultaneous questions and explanations.

"Their power-source is very probably the intra-atomic energy of iron; and if so, much remains to be done before I can proceed with my plan. I must have the most powerful structure in the known Universe before I can act. In the light of what I have just learned, the loss of the planetoid is but a trifle." Roger, as unmoved as one of his own automatons, was coldly analyzing the situation, thinking the thing through to its logical conclusion, paying no attention whatever to the losses of life, time and treasure now behind him.

"But what can you do about it?" growled the Russian.

"Many things. From the charts of the recorders we can compute their fields of force, and from that point

it is only a step to their method of liberating the energy. We shall build robots. They shall build other robots, who shall in turn construct another planetoid; one this time that, wielding the theoretical maximum of power, will be suited to my needs."

"And where will you build it?' We are marked. Invisibility now is useless. Triplanetary will find us, even if we take up an orbit beyond that of Pluto!"

"We have already left your Solarian system far behind. We are going to another system; one far enough removed so that the spy-rays of Triplanetary will never find us, and yet one that we can reach in a reasonable length of time with the energies at our command. Some fifteen days will be required for the journey, however, and our quarters are cramped. Therefore make places for yourselves wherever you can, and lessen the tedium of those fifteen days by working upon whatever problems are most pressing in your respective researches."

THE gray monster fell silent, immersed in what thoughts no one knew, and the scientists set out to obey his orders. Baxter, the British chemist, followed Penrose, the lantern-jawed, saturnine American engineer and inventor, as he made his way to the furthermost cubicle of the section.

"I say, Penrose, I'd like to ask you a couple of questions, if you don't mind?"

"Go ahead. Ordinarily it's dangerous to be a cackling hen anywhere around *him*, but he can't hear anything here now. His system is pretty well shot to pieces. You want to know all I know about Roger?"

"Exactly so. You have been with him so much longer than I have, you know. In some ways he impresses one as being scarcely human, if you know what I mean. Ridiculous, of course, but of late I have been wondering whether he really *is* human. He knows too much, about too many things. He seems to be acquainted with many solar systems, to visit which would require life times. Then, too, he has dropped remarks which would imply that he actually saw things that happened long before any living man could possibly have been born. Finally, he looks—well, peculiar—and certainly does not act human. I have been wondering, and have been able to learn nothing about him; as you have said, such talk as this aboard the planetoid was impossible."

"You needn't worry about being paid your price; that's one thing. If we live—and that was part of the agreement, you know—we will all get what we sold out for. You will become a belted earl. I have already made millions, and shall make many more. Similarly, Chatelier has had and will have his women, Anandrusung and Nishimura their cherished revenges, Hartkopf his power, and so on." He eyed the other speculatively, then went on:

"I might as well spill it all, since I'll never have a better chance and since you should know what the rest of us do. You're in the same boat with us and tarred with the same brush. There's a lot of gossip, that may or may not be true, but I know one very startling fact. Here it is. My great-great-grandfather left some notes which, taken in connection with certain things I myself saw on the planetoid, prove beyond question that our Roger went to Harvard University at the same time he did. Roger was a grown man then, and the elder Penrose noted that he was marked, like this," and the American sketched a cabalistic design.

"What!" Baxter exclaimed. "An adept of North Polar Jupiter—*then?*"

"Yes. That was before the First Jovian War, you know, and it was those medicine-men—really high-caliber scientists—that prolonged that war so . . ."

"But I say, Penrose, that's really a bit thick. When they were wiped out it was proved a lot of hocus-pocus . . ."

"Some of it was, but most of it wasn't," Penrose interrupted in turn. "I'm not asking you to believe anything except that one fact; I'm just telling you the rest of it. But it is also a fact that those adepts knew things and did things that take a lot of explaining. Now for the gossip, none of which is guaranteed. Roger is undoubtedly of Tellurian parentage, and the story is that his father was a moon-pirate, his mother a Greek adventuress. When the pirates were chased off the moon they went to Ganymede, you know, and some of them were captured by the Jovians. It seems that Roger was born at an instant of time sacred to the adepts, so they took him on. He worked his way up through the Forbidden Society as all adepts did, by various kinds of murder and job lots of assorted deviltries, until he got clear to the top—the seventy-seventh mystery . . ."

"THE secret of eternal youth!" gasped Baxter, awed in spite of himself.

"Right, and he stayed Chief Devil, in spite of all the efforts of all his ambitious sub-devils to kill him, until the turning-point of the First Jovian War. He cut away then in a space-ship, and ever since then he has been working—and working hard—on some stupendous plan of his own that nobody else has ever got even an inkling of. That's the story. True or not, it explains a lot of things that no other theory can touch. And now I think you'd better shuffle along; enough of this is a great plenty!"

Baxter went to his own cubby, and each man of the adept's cold-blooded crew methodically took up his task. True to prediction, in fifteen days a planet loomed beneath them and their vessel settled through a reeking atmosphere toward a rocky and forbidding plain. Then for another day they plunged along, a few thousand feet above the surface of that strange world, while Roger with his analytical detectors sought the most favorable location from which to wrest the materials necessary for his program of construction.

It was a world of cold; its sun was distant, pale, and wan. It had monstrous forms of vegetation, of which each branch and member writhed and fought with a grotesque and horrible individual activity. Ever and anon a struggling part broke from its parent plant and darted away in independent existence; leaping upon and consuming or being consumed by a fellow creature equally monstrous. This flora was of a uniform color—a lurid, sickly yellow. In form some of it was fern-like, some cactus-like, some vaguely tree-like; but it was all outrageous, inherently repulsive to all Solarian senses. And no less hideous were the animal-like forms of life, which slithered and slunk rapaciously through that fantastic pseudo-vegetation. Snake-like, reptile-like, bat-like, the creatures squirmed, crawled, and flew; each covered with a dankly oozing yellow hide and each motivated by twin common impulses—to kill and insatiably and indiscriminately to devour. Over this reeking wilderness Roger drove his vessel, untouched by its disgusting, its appalling ferocity and horror.

"There should be intelligence, of a kind," he mused, and swept the surface of the planet with an exploring beam. "Ah, yes, there is a city, of sorts," and in a few minutes the outlaws were look-

ing down upon a metal-walled city of roundly conical buildings.

Inside these structures and between and around them there scuttled formless blobs of matter, one of which Roger brought up into his vessel by means of a tractor ray. Held immovable by the beam it lay upon the floor, a strangely extensile, amoeba-like metal-studded mass of leathery substance. Of eyes, ears, limbs, or organs it apparently had none, yet it radiated an intensely hostile aura; a mental effluvium concentrated of rage and of hatred.

"Apparently the ruling intelligence of the planet," Roger commented. "Such creatures are useless to us; we can build robots in half the time required for their subjugation and training. Still, it should not be permitted to carry back what it may have learned of us." As he spoke the adept threw the peculiar being out into the air and dispassionately rayed it out of existence.

"That thing reminds me of a man I used to know, back in Penobscot." Penrose was as coldly callous as his unfeeling master. "The evenest-tempered man in town—mad all the time!"

EVENTUALLY Roger found a location which satisfied his requirements of raw materials, and made a landing upon that unfriendly soil. Sweeping beams denuded a great circle of life, and into that circle leaped robots. Robots requiring neither rest nor food, but only lubricants and power; robots insensible alike to that bitter cold and to that noxious atmosphere.

But the outlaws were not to win a foothold upon that inimical planet easily, nor were they to hold it without effort. Through the weird vegetation of the circle's bare edge there scuttled and poured along a horde of the metal-studded men—if "men" they might be called—who, ferocity incarnate, rushed the robot line. Mowed down by hundreds, still they came on; willing, it seemed to expend any number of lives in order that one living creature might once touch a robot with one outthrust metallic stud. Whenever that happened there was a flash as of lightning, the heavy smoke of burning insulation, grease, and metal, and the robot went down out of control. Recalling his remaining automatons, Roger sent out a shielding screen, against which the defenders of their planet raged in impotent fury. For days they hurled themselves and their every force against that impenetrable barrier, then withdrew: temporarily stopped, but by no means acknowledging defeat.

Then, while Roger and his cohorts directed affairs from within their comfortable and now sufficiently roomy vessel, there came into being around it an industrial city of metal, peopled by metallic and insensate mechanisms. Mines were sunk, furnaces were blown in, smelters belched forth into the already unbearable air their sulphurous fumes, rolling mills and machine shops were built and equipped; and as fast as new enterprises were completed additional robots were ready to man them. In record time the heavy work of girders, members, and plates was well under way; and shortly thereafter light, deft, and multi-fingered mechanical men began the interminable task of building and installing the prodigious amount of precise machinery required for the vast structure. Roger was well content; but one day he was rudely awakened from his dream of complete isolation.

Even though he had no reason to believe that there was anything dangerous within hundreds of millions of miles, it was Roger's cautious custom to release the screens from time to time, in order

to allow his detectors to range out. This day, as he sent out his beams, his hard gray eyes grew even harder.

"Mirsky! Nishimura! Come here!" he snapped, and showed them upon his plate an enormous sphere of steel, its rays flaming viciously. "Is there any doubt whatever in your minds as to the System to which that ship belongs?"

"None at all—Triplanetarian," replied the Russian. "While larger than any I have seen before, its construction is unmistakable. They managed to trace us, and are testing out their weapons before attacking. Do we attack or do we run away?"

"If Triplanetarian, and it surely is, we attack," coldly. "This one section is armed and powered to defeat Triplanetary's entire navy. We shall take that ship, and shall add its slight resources to our own. And it may even be that they have picked up the three who escaped me. . . . I have never yet been balked for long. Yes, we shall take that vessel. And those three sooner or later. Bradley I care nothing about . . . but Costigan handled me . . . and the woman. . . ." Diamond-hard eyes glared balefully at the urge of thoughts to a clean and normal mind unthinkable.

"To your posts," he ordered. "The robots will continue to function under their automatic controls during the short time it will require to abate this nuisance."

"*ONE moment!*" A strange voice roared from the speakers. "Consider yourselves under arrest, by order of the Triplanetary Council! Surrender and you shall receive impartial hearing; fight us and you shall never come to trial. From what we have learned of Roger, we do not expect him to surrender, but if any of you other men wish to avoid immediate death, leave your vessel at once. We will come back for you later."

"Any of you wishing to leave this vessel have my full permission to do so," Roger announced, disdaining any reply to the challenge of the "Boise." "Any such, however, will not be allowed inside the planetoid area after the rest of us return from wiping out that patrol. We attack in one minute."

"Would not one do better by stopping on?" Baxter, in the quarters of the American, was in doubt as to the most profitable course to pursue. "I should leave immediately if I thought that that ship could win; but I do not fancy that it can, do you?"

"That ship? *One* Triplanetary ship against *us!*" Penrose laughed raucously. "Do as you please. I'd go in a minute if I thought that there was any chance of us losing; but there isn't, so I'm staying. I know which side *my* bread's buttered on. Those cops are bluffing, that's all. Not bluffing exactly, either, because they'll go through with it as long as they last. Foolish, but it's a way they have—they'll die trying every time, instead of running away, even when they know they're licked before they start. They don't use good judgment."

"None of you are leaving? Very well, you each know what to do," came Roger's emotionless voice. The stipulated minute having elapsed, he advanced a lever and the outlaw cruiser slid quietly into the air.

Toward the poised "Boise" Roger steered. Within range, he flung out a weapon new-learned and supposedly irresistible to any ferrous thing or creature, the red converter-field of the Nevians. For Roger's analytical detectors had stood him in good stead during those frightful minutes in the course of which the planetoid had borne the brunt of Nerado's superhuman attack; in such good stead that from the records of those

ingenius instruments he and his scientists had been able to reconstruct not only the generators of the attacking forces, but also the screens employed by the amphibians in the neutralization of similar beams. With a vastly inferior armament the smallest of Roger's vessels had defeated the most powerful battleships of Triplanetary; what had he to fear in such a heavy craft as the one he now was driving, one so superlatively armed and powered? Well it was for his peace of mind that he had no inkling that the harmless-looking sphere he was so blithely attacking was in reality the much-discussed, half-mythical "super-ship" of Triplanetary's Secret Service; nor that its already unprecedented armament had been reenforced, thanks to that hated Costigan, with Roger's own every worth-while idea, as well as with every weapon and defense known to that arch-Nevian, Nerado!

UNKNOWING and contemptuous, Roger launched his converter field, and instantly found himself fighting for his very life. For from Rodebush at the controls down, the men of the Secret Service countered with wave after wave and with salvo after salvo of vibratory and material destruction. No thought of mercy for the men of the pirate ship could enter their minds. The outlaws had each been given a chance to surrender, and each had refused it. Refusing, they knew, as the Triplanetarians knew and as all modern readers know, meant that they were staking their lives upon victory. For with modern armaments it is seldom indeed that a single man lives through the defeat in battle of a war-vessel of space.

Roger launched his field of red opacity, but it did not reach even "Boise's" screens. All space seemed to explode into violet spendor as Rodebush neutralized it, drove it back with his obliterating zone of force; but even that all-devouring zone could not touch Roger's peculiarly efficient screen. The outlaw vessel stood out, unharmed. Ultra-violet, infra-red, pure heat, infra-sound, solid beams of high-tension high-frequency current in whose paths the most stubborn metals would be volatilized instantly; all iron-driven, every deadly and torturing vibration known was hurled against that screen; but it, too, was iron-driven, and it held. Even the awful force of the macrobeam was dissipated by it—reflected, hurled away on all sides in coruscating torrents of blinding, dazzling energy. Cooper, Adlington, Spencer, and Dutton hurled against it their bombs and torpedoes—and still it held. But Roger's fiercest blasts and heaviest projectiles were equally impotent against the force-shields of the super-ship. The adept, having no liking for a battle upon anything like equal terms, sought safety in flight, only to be brought to a crashing, stunning halt by a massive tractor beam.

"That must be that sixth-phase polycyclic screen that Conway reported on," Cleveland frowned in thought. "I've been doing a lot of work on that, and I think I've calculated an opener for it, Fred, but I'll have to have number ten projector and the whole output of number ten power room. Can you let me play with that much juice for a while? All right, Blake, tune her up to fifty-five thousand—there, hold it! Now, you other fellows, listen! I'm going to try to drill a hole through that screen with a hollow, quasi-solid beam; like a diamond drill cutting out a core. You won't be able to shove anything into the hole from outside the beam, so you'll have to steer your cans out through the central orifice of number ten projector —that'll be cold, since I'm going to use only the edge. I don't know how long

I'll be able to hold the hole open, though so shoot them along as fast as you can. Ready? Here goes!"

He pressed a series of contacts. Far below, in number ten converter room, massive switches drove home and the enormous mass of the vessel quivered under the terrific reaction of the newly-calculated, semi-material beam of energy that was hurled out, backed by the mightiest of all the mighty converters and generators of Triplanetary's super-dreadnaught. That beam, a pipe-like hollow cylinder of intolerable energy, flashed out, and there was a rending, tearing crash as it struck Roger's hitherto impenetrable wall. Struck and clung, grinding, boring in, while from the raging inferno that marked the circle of contact of cylinder and shield the pirates' screen radiated scintillating torrents of cracking, streaming sparks, lightning-like in length and in intensity.

DEEPER and deeper the gigantic drill was driven. It was through! Pierced Roger's polycyclic screen; exposed the bare metal of Roger's walls! And now, concentrated upon one point, flamed out in seemingly redoubled fury Triplanetary's raging rays—in vain. For even as they could not penetrate the screen, neither could they penetrate the wall of Cleveland's drill, but rebounded from it in the cascaded brilliance of thwarted lightning.

"Oh, what a dumb-bell I am!" groaned Cleveland. "Why, oh why didn't I have somebody rig up a secondary SX7 beam on Ten's inner rings? Hop to it, will you, Blake, so that we'll have it in case they are able to stop the cans?"

But the pirates could not stop all of Triplanetary's projectiles, now hurrying along inside the pipe as fast as they could be driven. In fact, for a few minutes desperate Roger, knowing that he faced his long life's gravest crisis, paid no attention to them at all, nor to any of his own useless offensive weapons: he struggled only and madly to break away from the savage grip of the "Boise's" tractor rod. Futile. He could neither cut nor stretch that inexorably anchoring beam. Then he devoted his every resource to the closing of that unbelievable breach in his shield; the barrier which through all previous emergencies had kept death at bay. Equally futile. His most desperate efforts resulted only in more frenzied displays of incandescence along the curved surface of contact of that penetrant cylinder. And through that terrific conduit came speeding package after package of destruction. Bombs, and armor-piercing shells, gas shells, and shells of poisonous and corrosive fluids followed each other in close succession. The surviving scientists of the planetoid, expert gunners and ray-men all, destroyed many of the projectiles, but it was not humanly possible to frustrate them all. And the breach could not be forced shut against the all but irresistible force of Cleveland's "opener." And with all his power Roger could not shift his vessel's position in the grip of Triplanetary's tractors sufficiently to bring a projector to bear upon the super-ship along the now unprotected axis of that narrow, but deadly tube.

THUS it was that the end came soon. A war-head touched steel plating and there ensued a world-wracking explosion of atomic iron. Gaping wide, helpless, with all defenses down, other torpedoes entered the stricken hulk and completed its destruction even before they could be recalled. Explosive bombs literally tore the pirate vessel to fragments, while vials of pure corrosion dissolved her substance into dripping corruption and reeking gases filled every cranny of the wreckage as its torn and

dismembered fragments began their long plunge to the ground. The space-ship followed the pieces down, and Rodebush sent out an exploring ray.

" . . . . resistance was such that it was necessary to use corrosive, and ship and contents were completely disintegrated," he dictated into his vessel's log, some time later. "While there were of course no remains recognizable as human, it is practically certain that Roger and his last eleven men died.

"Look here, Fred," Cleveland called his attention to the plate, upon which was pictured a horde of the peculiar inhabitants of the ghastly planet, wreaking their frenzied electrical wrath upon everything within the circle bared by Roger. I was just going to suggest that we clean up that planetoid Roger started, but I see that the local boys are attending to it."

"Just as well, perhaps. I would like to stay and study these people a little while, but we must get back on the trail of the Nevians," and the "Boise" leaped away into space, toward the line of flight of the amphibians.

THEY reached that line and along it they traveled at full normal blast. As they traveled their detecting receivers and amplifiers were reaching out with their utmost power; ultra-instruments capable of rendering audible any signal originating within many light-years of them, upon any known frequency. And constantly at least two men were listening to those instruments with every sense concentrated in their ears. Listening—straining to distinguish in the deafening roar of background noise from the over-driven tubes any sign of voice or signal. Listening—while, millions upon untold millions of miles beyond even the prodigious reach of those ultra-instruments, three human beings, pitted against overwhelming odds, were even then sending out into empty space an almost hopeless appeal for the aid so desperately needed!

CHAPTER XII

The Specimens Escape

KNOWING well that conversation with its fellows is one of the greatest needs of any intelligent being, the Nevians had permitted the Terrestrial specimens to retain possession of their ultra-beam communicators. Thus it was that Costigan had been able to keep in touch with his sweetheart and with Bradley. He learned that each had been placed upon exhibition in a different Nevian city; that the three had been separated in response to an insistent popular demand for such a distribution of the peculiar, but highly interesting creatures from a distant solar system. They had not been harmed. In fact, each was visited daily by a specialist, who made sure that his charge was being kept in the pink of condition.

As soon as he became aware of this condition of things Costigan became morose. He sat still, drooped, and pined away visibly. He refused to eat, and of the worried specialist he demanded liberty. Then, failing in that as he knew he would fail, he demanded something to *do*. They pointed out to him, reasonably enough, that in such a civilization as theirs there was nothing he *could* do. They assured him that they would do anything they could to alleviate his mental suffering, but that since he was a museum piece he must see, himself, that he must be kept on display for a short time. Wouldn't he please behave himself and eat, as a reasoning being should? Costigan sulked a little longer, then wavered. Finally he agreed to compromise. He would eat and exercise if they would fit up a laboratory in his apartment, so

that he could continue the studies he had begun upon his own native planet. To this they agreed, and thus it came about that one day the following conversation was held:

"Clio? Bradley? I've got something to tell you this time. Haven't said anything before, for fear things might not work out, but they did. I went on a hunger strike and made them give me a complete laboratory. As a chemist I'm a darn good electrician; but luckily, with the sea-water they've got here, it's a very simple thing to make. . . ."

"Hold on!" snapped Bradley. "Somebody may be listening in on us!"

"They aren't. They can't, without my knowing it, and I'll cut off the second anybody tries to synchronize with my beam. To resume—making Vee-Two is a very simple process, and I've got everything around here that's hollow clear full of it. . . ."

"How come they let you?" asked Clio.

"Oh, they don't know what I'm doing. They watched me for a few days, and all I did was make up and bottle the weirdest messes imaginable. Then I finally managed to separate oxygen and nitrogen, after trying hard all of one day; and when they thought they saw that I didn't know anything about either one of them or what to do with them after I had them, they gave me up in disgust as a plain dumb ape and haven't paid any attention to me since. So I've got me plenty of kilograms of liquid Vee-Two, all ready to touch off. I'm getting out of here in about three minutes and a half, and I'm coming over after you folks, in a new, iron-powered space-speedster that they don't know I know anything about. They've just given it its final tests, and it's the slickest thing you ever saw."

"BUT Conway, dearest, you can't possibly rescue me," Clio's voice broke. "Why, there are thousands of them, all around here. If you can get away, go, dear, but don't . . . ."

"I said I was coming after you, and if I can get away I'll be there. A good whiff of this stuff will lay out a thousand of them just as easily as it will one. Here's the idea. I've made a gas mask for myself, since I'll be in it where it's thick, but you two won't need any. The gas is soluble enough in water so that three or four thicknesses of wet cloth over your noses will be enough. I'll tell you when to wet down. We're going to break away or go out trying—there aren't enough amphibians between here and Andromeda to keep us humans cooped up like menagerie animals forever! But here comes my specialist with the keys to the city; time for the overture to start. See you later!"

The Nevian physician directed his key-tube upon the transparent wall of the chamber and an opening appeared, an opening which vanished as soon as he had stepped through it; Costigan kicked a valve open; and from various innocent tubes there belched forth into the water of the central lagoon and into the air over it a flood of deadly vapor. As the Nevian turned toward the prisoner there was an almost inaudible hiss and a tiny jet of the frightful, outlawed stuff struck his open gills, just below his huge, conical head. He tensed momentarily, twitched convulsively just once, and fell motionless to the floor. And outside, the streams of avidly soluble liquefied gas rushed out into air and into water. It spread, dissolved, and diffused with the extreme mobility which is one of its characteristics; and as it diffused and was borne outward the Nevians, in their massed hundreds, died. Died not knowing what killed them; not knowing even that they died. Costigan, bitterly resentful of the inhuman treatment accorded the three and fiercely anxious for the

success of his plan of escape, held his breath and, grimly alert, watched the amphibians die. When he could see no more motion anywhere he donned his gas-mask, strapped upon his back a large canister of the poison—his capacious pockets were already full of smaller containers—and two savagely exultant sentences escaped him.

"I am a poor, ignorant specimen of ape, that can be let play with apparatus, am I?" he rasped, as he picked up the keytube of the specialist and opened the door of his prison. "Maybe they'll learn sometime that it ain't always safe to judge by the looks of a flea how far he can jump!"

He stepped out through the opening into the water, and, burdened as he was, made shift to swim to the nearest ramp. Up it he ran, toward a main corridor. But ahead of him there was wafted a breath of dread Vee-Two, and where that breath went, went also unconsciousness—an unconsciousness which would deepen gradually into permanent oblivion save for the prompt intervention of one who possessed, not only the necessary antidote, but the equally important knowledge of exactly how to use it. Upon the floor of that corridor were strewn Nevians, who had dropped in their tracks. Past or over their bodies Costigan strode, pausing only to direct a jet of lethal vapor into whatever branching corridor or open doorway caught his eye. He was going to the intake of the city's ventilation plant, and no unmasked creature dependent for life upon oxygen could bar his path. He reached the intake, tore the canister from his back, and released its full, vast volume of horrid contents into the primary air stream of the entire city.

AND all throughout that doomed city Nevians dropped; quietly and without a struggle, unknowing. Busy executives dropped upon their cushioned, flat-topped desks; hurrying travelers and messengers dropped upon the floors of the corridors or relaxed in the noxious waters of the ways; lookouts and observers dropped before their flashing screens; central operators of communications dropped under the winking lights of their panels. Observers and centrals in the outlying sections of the city wondered briefly at the unwonted universal motionlessness and stagnation; then the racing taint in water and in air reached them, too, and they ceased wondering—forever.

Then through those quiet halls Costigan stalked to a certain storage room, where with all due precaution he donned his own suit of Triplanetary armor. Making an ungainly bundle of the other Solarian equipment stored there, he dragged it along behind him as he clanked back toward his prison, until he neared the dock at which was moored the Nevian space-speedster which he was determined to take. Here, he knew, was the first of many critical points. The crew of the vessel was aboard, and, with its independent air-supply, unharmed. They had weapons, were undoubtedly alarmed, and were very probably highly suspicious. They, too, had ultra-beams and might see him, but his very closeness to them would tend to protect him from ultra-beam observation Therefore he crouched tensely behind a buttress, staring through his spy-ray goggles, waiting for a moment when none of the Nevians would be near the entrance, but grimly resolved to act instantly should he feel any touch of a spying ultra-beam.

"Here's where the pinch comes," he growled to himself. "I know the combination, but if they're suspicious enough and act quick enough they can seal that door on me before I can get it open, and then rub me out like a blot; but . . . . ah!"

The moment had arrived, before the touch of any revealing ray. He trained the key-tube, the entrance opened, and through that opening in the instant of its appearance there shot a brittle bulb of glass, whose breaking meant death. It crashed into fragments against a metallic wall and Costigan, entering the vessel, consigned its erstwhile crew one by one to the already crowded waters of the lagoon. He then leaped to the controls and drove the captured speedster through the air, to plunge it down upon the surface of the lagoon beside the door of the isolated structure which had for so long been his prison. Carefully he transferred to the vessel the motley assortment of containers of Vee-Two, and after a quick check-up to make sure that he had overlooked nothing, he shot his craft straight up into the air. Then only did he close his ultra-wave circuits and speak.

"Clio, Bradley—I got away clean, without a bit of trouble. Now I'm coming after you, Clio."

"Oh, it's wonderful that you got away, Conway!" the girl exclaimed. "But hadn't you better get Captain Bradley first? Then, if anything should happen, he would be of some use, while I . . . ."

"I'll knock him into an outside loop if he does!" the captain snorted, and Costigan went on:

"You won't need to. You come first, Clio, of course. But you're too far away for me to see you with my spy, and I don't want to use the high-powered beam of this boat for fear of detection; so you'd better keep on talking, so that I can trace you."

"THAT'S one thing I *am* good at!" Clio laughed in sheer relief. "If talking were music, I'd be a full brass band!" and she kept up a flow of inconsequential chatter, until Costigan told her that it was no longer necessary; that he had established the line.

"Any excitement around there yet?" he asked her then.

"Nothing unusual that I can see," she replied. "Why? Should there be some?"

"I hope not, but when I made my getaway I couldn't kill them all, of course, and I thought maybe they might connect things up with my jail-break and tell the other cities to take steps about you two. But I guess they're pretty well disorganized back there yet, since they can't know who hit them, or what with, or why. I must have got about everybody that wasn't sealed up somewhere, and it doesn't stand to reason that those who are left can check up very closely for a while yet. But they're nobody's fools—they'll certainly get conscious when I snatch you, maybe before . . . . there, I see your city, I think."

"What are you going to do?"

"Same as I did back there, if I can. Poison their primary air and all the water I can reach. . . ."

"Oh, Conway!" Her voice rose to a scream. They must know—they're all getting out of the water and are rushing inside the buildings as fast as they possibly can!"

"I see they are," grimly. "I'm right over you now, 'way up. Been locating their primary intake. They've got a dozen ships around it, and have guards posted all along the corridors leading to it; and *those guards are wearing masks!* They're clever birds, all right, those amphibians—they know what they got back there and how they got it. That changes things, girl! If we use gas here we won't stand a chance in the world of getting old Bradley. Stand by to jump when I open that door!"

"Hurry, dear! They are coming out here after me!"

"Sure they are." Costigan had already seen the two Nevians swimming out toward Clio's cage, and had hurled his vessel downward in a screaming

power dive. "You're too valuable a specimen for them to let you be gassed, but if they can get there before I do they're traveling fast!"

He miscalculated slightly, so that instead of coming to a halt at the surface of the liquid medium the speedster struck with a crash that hurled solid masses of water for hundreds of yards. But no ordinary crash could harm that vessel's structure, her gravity controls were not overloaded, and she shot back to the surface; gallant ship and reckless pilot alike unharmed. Costigan trained his key-tube upon the doorway of Clio's cell, then tossed it aside.

"Different combinations over here!" he barked. "Got to cut you out—lie down in that far corner!"

His hands flashed over the panel, and as Clio fell prone without hesitation or question a heavy beam literally blasted away a large portion of the roof of the structure. The speedster shot into the air and dropped down until she rested upon the tops of opposite walls; walls still glowing, semi-molten. The girl piled a stool upon the table and stood upon it, reached upward, and seized the mailed hands extended downward toward her. Costigan heaved her up into the vessel with a powerful jerk, slammed the door shut, leaped to the controls, and the speedster darted away.

"YOUR armor's in that bundle there. Better put it on, and check your Lewistons and pistols—no telling what kind of jams we'll get into," he snapped, without turning. "Bradley, start talking .... all right, I've got your line. Better get your wet rags ready and get organized generally—every second will count by the time we get there. We're coming so fast that our outer plating's white hot, but it may not be fast enough, at that."

"It isn't fast enough, quite," Bradley announced, calmly. "They're coming out after me now."

"Don't fight them and probably they won't paralyze you. Keep on talking, so that I can find out where they take you."

"No good, Costigan." The voice of the old space-flea did not reveal a sign of emotion as he made his dread announcement. "They have it all figured out. They're not taking any chances at all—they're going to paral . . . ." His voice broke off in the middle of the word.

With a bitter imprecation Costigan flashed on the powerful ultra-beam projector of the speedster and focused the plate upon Bradley's prison; careless now of detection, since the Nevians were already warned. Upon that plate he watched the Nevians carry the helpless body of the captain into a small boat, and continued to watch as they bore it into one of the largest buildings of the city. Up a series of ramps they took the still form, placing it finally upon a soft couch in an enormous and heavily guarded central hall. Costigan turned to his companion, Clio, and even through the helmets she could see plainly the white agony of his expression. He moistened his lips and tried twice to speak—tried and failed; but he made no move either to cut off their power or to change their direction.

"Of course," she approved, steadily. "We are going through. I know that you *want* to run with me, but if you actually did it, I would never want to see you or hear of you again, and you would hate me forever."

"Hardly that." The anguish did not leave his eyes and his voice was hoarse and strained, but his hands did not vary the course of the speedster by so much as a hair's breadth. "You're the finest little fellow that ever waved a plume, and I would love you no matter what happened. I'd trade my immortal soul

to the devil if it would get you out of this mess, but we're both in it up to our necks and we can't dog it now. If they kill him we beat it—he and I both knew that it was on the chance of that happening that I took you first—but as long as all three of us are alive it's all three or none."

"Of course," she said again, as steadily, thrilled this time to the depths of her being by the sheer manhood of him who had thus simply voiced his Code; a man of such fiber that neither love of life, nor the infinitely more powerful love of her which she knew he bore, could make him lower its high standard.

"We are going through. Forget that I am a woman. We are three human beings, fighting a world full of monsters. I am simply one of us three. I will steer your ship, fire your projectors, or throw your bombs. What can I do best?"

"Throw bombs," he directed, briefly. He knew what must be done were they to have even the slightest chance of winning clear. "I'm going to blast a hole down into the auditorium, and when I do you stand by that port and start dropping bottles of perfume. Throw a couple of big ones right down the shaft I make, and the rest of them most anywhere, after I cut the wall open. They'll do good wherever they hit, land or water."

"But Captain Bradley—he'll be gassed, too." Her fine eyes were troubled.

"CAN'T be helped. I've got the antidote, and it'll work any time under an hour. That'll be lots of time—if we aren't gone in less than ten minutes we'll be staying here. They're bringing in platoons of militia in full armor, and if we don't beat those boys to it we're in for plenty of grief. All right—start throwing!"

The speedster had come to a halt directly over the imposing edifice within which Bradley was incarcerated, and a mighty beam had flared downward, digging a fiery well through floor after floor of stubborn metal. The ceiling of the amphitheater pierced, the beam expired; and down into that assembly hall there dropped two canisters of Vee-Two; to crash and to fill its atmosphere with imperceptible death. Then the beam flashed on again, this time at maximum power, and with it Costigan burned away half of the gigantic building. Burned it away until room above room gaped open, shelf-like, to outer atmosphere; the great hall now resembling an over-size pigeon-hole surrounded by smaller ones. Into that largest pigeon-hole the speedster darted, and cushioned desks and benches crashed down, crushed flat under its enormous weight as it came to rest upon the floor.

Every available guard had been thrown into that room, regardless of customary occupation or of equipment. Most of them had been ordinary watchmen, not even wearing masks, and all such were already down. Many, however, were protected by masks, and a few were dressed in full armor. But no portable armor could mount defenses of sufficient power to withstand the awful force of the speedster's weapons, and one flashing swing of a projector swept the hall almost clear of life.

"Can't shoot very close to Bradley with this big beam, but I'll mop up on the rest of them by hand. Stay here and cover me, Clio!" Costigan ordered, and went to open the door.

"I can't—I won't!" Clio replied instantly. "I don't know the controls well enough. I'd kill you or Captain Bradley, sure; but I *can* shoot, and I'm going to!" and she leaped out, close upon his heels.

Thus, flaming Lewiston in one hand and barking automatic in the other, the two mailed figures advanced toward Bradley; now doubly helpless: paralyzed by

his enemies and gassed by his friends. For a time the Nevians melted away before them, but as they approached more nearly the couch, upon which the captain was, they encountered six figures encased in armor fully as capable as their own. The beams of the Lewistons rebounded from that armor in futile pyrotechnics, the bullets of the automatics spattered and exploded impotently against it. And behind that single line of armored guards were massed perhaps twenty unarmored, but masked, soldiers; and scuttling up the ramps leading into the hall were coming the platoons of heavily-armored figures which Costigan had previously seen.

Decision instantly made, Costigan ran back toward the speedster, but he was not deserting his companions.

"Keep the good work up!" he instructed the girl as he ran. "I'll pick those jaspers off with a pencil ray and then stand off the bunch that's coming while you rub out the rest of that crew there and drag Bradley back here."

BACK at the control panel, he trained a narrow, but intensely dense pencil of livid flame, and one by one the six armored figures fell. Then, knowing that Clio could handle the remaining opposition, he devoted his attention to the reenforcements so rapidly approaching from the sides. Again and again the heavy beam lashed out, now upon this side, now upon that, and in its flaming path Nevians disappeared. And not only Nevians—in the incredible energy of that beam's blast, floor, walls, ramps, and every material thing vanished in clouds of thick and brilliant vapor. The room temporarily clear of foes, he sprang again to Clio's assistance, but her task was nearly done. She had "rubbed out" all opposition and, tugging lustily at Bradley's feet, had already dragged him almost to the side of the speedster.

"'At-a-girl, Clio!" cheered Costigan, as he picked up the burly captain and tossed him through the doorway. "Highly useful, girl of my dreams, as well as ornamental. In with you, and we'll start out to go places!"

But getting the speedster out of the now completely ruined hall proved to be much more of a task than driving it in had been, for scarcely had the Terrestrials closed their locks than a section of the building collapsed behind them, cutting off their retreat. Nevian submarines and airships were beginning to arrive upon the scene, and were raying the building viciously in an attempt to entrap or to crush the Terrestrials in its ruins. Costigan managed finally to blast his way out, but the Nevians had had time to assemble in force and he was met by a concentrated storm of beams and of metal from every inimical weapon within range.

But not for nothing had Conway Costigan selected for his dash for liberty the craft which, save only for the two immense interstellar cruisers, was the most powerful vessel ever built upon red Nevia. And not for nothing had he studied minutely and to the last, least detail every item of its controls and of its armament during wearily long days and nights of solitary imprisonment. He had studied it under test, in action, and at rest; studied it until he knew thoroughly its every possibility—and what a ship it was! The iron-driven generators of his shielding screens handled with ease the terrific load of the Nevians' assault, his polycyclic screens were proof against any material projectile, and the machines supplying his offensive beams with power were more than equal to their tasks. Driven now at full rating those frightful weapons lashed out against the Nevian blocking the way, and under their impacts her screens flared brilliantly through the spectrum and went down.

And in the instant of their failure the enemy vessel was literally blown into nothingness—no unprotected metal, however resistant, could exist for a moment in the pathway of those iron-driven tornadoes of pure energy.

Ship after ship of the Nevians plunged toward the speedster in desperately suicidal attempts to ram her down, but each met the same flaming fate before its mass could collide with the ship of the Terrestrials. Then, from the grouped submarines far below, there reached up red rods of force, which seized the spaceship and began relentlessly to draw her down.

"What are they doing that for, Conway? *They* can't fight us!"

"They don't want to fight us. They want to hold us, but I know what to do about that, too," and the powerful tractor rods snapped as a plane of lurid light drove through them. Upward now at the highest permissible velocity the speedster leaped, and past the few ships remaining above her she dodged; there was nothing now between her and the freedom of boundless space.

"You did it, Conway; you did it!" Clio exulted. "Oh, Conway, you're just simply wonderful!"

"I HAVEN'T done it yet," Costigan cautioned her. "The worst is yet to come. Nerado. He's why they wanted to hold us back, and why I was in such a hurry to get away. That boat of his is bad medicine, girl, and we want to put plenty of kilometers behind us before he gets started."

"But do you think he will chase us?"

"*Think* so? I *know* so! The mere facts, that we are rare specimens and that he told us that we were going to stay there all the rest of our lives, would make him chase us clear to Dustheimer's Nebula. Besides that, we stepped on their toes pretty heavily before we left. We know altogether too much now to be let get back to Tellus; and finally, they'd all die of acute enlargement of the spleen if we get away with this prize ship of theirs. I hope to tell you they'll chase us!"

He fell silent, devoting his whole attention to his piloting, driving his craft onward at such velocity that its outer plating held steadily at the highest point of temperature compatible with safety. Soon they were out in open space, hurtling toward the sun under the drive of every possible iota of power, and Costigan took off his armor and turned toward the helpless body of the captain.

"He looks so . . . . so . . . . so *dead*, Conway! Are you really sure that you can bring him to?"

"Absolutely. Lots of time yet. Just three simple squirts in the right places will do the trick." He took from a locked compartment of his armor a small steel box, which housed a surgeon's hypodermic and three vials. One, two, three, he injected small, but precisely measured amounts of the fluids into the three vital localities, then placed the inert form upon a deeply cushioned couch.

"There! That'll take care of the gas in five or six hours. The paralysis will wear off before that, so he'll be all right when he wakes up; and we're going away from here with every watt of power we can put out. We have done everything I know how to do, for the present."

Then only did Costigan turn and look down, directly into Clio's eyes. Wide, eloquent blue eyes that gazed back up into his, tender and unafraid; eyes freighted with the oldest message of woman to chosen man. His hard young face softened wonderfully as he stared at her; there were two quick steps and they were in each other's arms. Clio's lithely rounded form nestled against Costigan's powerful body as his mighty arms tightened around her; his neck and shoul-

der were no less enthusiastically clasped, and less strongly only because of her woman's slighter musculature. Lips upon eager lips, blue eyes to gray, motionless they stood clasped in ecstasy; thinking nothing of the dreadful past, nothing of the fearful future, conscious only of the glorious, the wonderful present.

"CLIO mine . . . . darling . . . . girl, girl, how I love you!" Costigan's deep voice was husky with emotion. "I haven't kissed you for seven thousand years! I don't rate you, by hundreds of steps; but if I can just get you out of this mess, I swear by all the space . . . ."

"You needn't, lover. Rate *me?* Good Heavens, Conway? It's just the other way . . . ."

"Chop it!" he commanded in her ear. "I'm still dizzy at the idea of your loving me at all, to say nothing of loving me *this* way! But you do, and that's all I ask, here or hereafter!"

"Love you? *Love* you!" Their mutual embrace tightened and her low voice thrilled brokenly as she went on: "Conway, dearest . . . . I can't say a thing, but you know . . . . Oh, Conway!"

AFTER a time Clio drew a long and tremulous, but supremely happy breath as the realities of their predicament once more obtruded themselves upon her consciousness. She released herself gently from Costigan's arms.

"Do you really think that there is a chance of us getting back to the earth, so that we can be together . . . . always?"

"A chance, yes. A probability, no," he replied, unequivocally. "It depends upon two things. First, how much of a start we got on Nerado. His ship is the biggest and fastest thing I ever saw, and if he strips her down and drives her—which he will—he'll catch us long before we can make Tellus. On the other hand, I gave Rodebush a lot of data, and if he and Lyman Cleveland can add it to their own stuff and get that super-ship of ours rebuilt in time, they'll be out here on the prowl; and they'll have what can give even Nerado plenty of argument. No use worrying about it, anyway. We won't know anything until we can detect one or the other of them, and then will be the time to do something about it."

"If Nerado catches us, will you . . . ." She paused.

"Rub you out? I will not. Even if he does catch us, and takes us back to Nevia, I won't. There's lots more time coming onto the clock. Nerado won't hurt either of us badly enough to leave scars, either physical, mental, or moral. I'd kill you in a second if it were Roger; he's dirty and he's thoroughly bad. But Nerado's a good enough old scout, in his way. He's big and he's clean. You know, I could really like that fish, if I could meet him on terms of equality sometime?"

"*I* couldn't!" she declared, vigorously. "He's crawly and scaly and snaky; and he smells so . . . . so . . . ."

"So rank and fishy?" Costigan laughed deeply. "Details, girl; mere details. I've seen people who looked like money in the bank and who smelled like a bouquet of violets that you couldn't trust half the length of Nerado's neck."

"But look what he did to us!" she protested. "And they weren't trying to recapture us back there; they were trying to kill us."

"That was perfectly all right, what he did and what they did—what else could they have done?" he wanted to know. "And while you're looking, look at what we did to them—plenty, I'd say. But we all had it to do, and neither side will blame the other for doing it. He's a square shooter, I tell you."

"WELL, maybe, but I don't like him a bit, and let's not talk about him any more. Let's talk about us. Remember what you said once, when you advised me to 'let you lay,' or whatever it was?" Woman-like, she wished to dip again lightly into the waters of pure emotion, even though she had such a short time before led the man out of their profoundest depths. But Costigan, into whose hard life love of woman had never before entered, had not yet recovered sufficiently from his soul-shaking plunge to follow her lead. Inarticulate, distrusting his newly found supreme happiness, he must needs stay out of those enchanted waters or plunge again. And he was afraid to plunge—diffident, still deeming himself unworthy of the miracle of this wonder-girl's love—even though every fiber of his being shrieked its demand to feel again that slender body in his clasping arms. He did not consciously think those thoughts. He acted them without thinking; they were inherent in his personality.

"I do remember, and I still think it's a sound idea, even though I am too far gone now to let you put it into effect," he assured her, half seriously. He kissed her, tenderly and reverently, then studied her carefully. "But you look as though you'd been on a Martian picnic. When did you eat last?"

"I don't remember, exactly. This morning, I think."

"Or maybe last night, or yesterday morning? I thought so! Bradley and I can eat anything that's chewable, and drink anything that will pour, but you can't. I'll scout around and see if I can't fix up something that you'll be able to eat."

He rummaged through the store-rooms, emerging with sundry viands from which he prepared a highly satisfactory meal.

"Think you can sleep now, sweetheart?" After supper, once more within the circle of Costigan's arms, Clio nodded her head against his shoulder.

"Of course I can, dear. Now that you are with me, out here alone, I'm not a bit afraid any more. You will get us back to the earth some way, sometime; I just know that you will. Good-night, Conway."

"Good-night, Clio . . . . little sweetheart," he whispered, and went back to Bradley's side.

In due time the captain recovered consciousness, and slept. Then for days the speedster flashed on toward our distant solar system; days during which her wide-flung detector screens remained cold.

"I don't know whether I'm afraid they'll hit something or afraid that they won't," Costigan remarked more than once, but finally those tenuous sentinels did in fact encounter an interfering vibration. Along the detector line a visi-beam sped, and Costigan's face hardened as he saw the unmistakable outline of Nerado's interstellar cruiser, far behind them.

"Well, a stern chase always was a long one," Costigan said finally. "He can't catch us for plenty of days yet . . . . now what?" for the alarms of the detectors had broken out anew. There was still another point of interference to be investigated. Costigan traced it; and there, almost dead ahead of them, between them and their sun, nearing them at the incomprehensible rate of the sum of the two vessels' velocities, came another cruiser of the Nevians!"

"Must be the sister-ship, coming back from our System with a load of iron," Costigan deduced. "Heavily loaded as she is, we may be able to dodge her; and she's coming so fast that if we can stay out of her range we'll be all right—she won't be able to stop for probably three or four days. But if our super-ship is

anywhere in these parts, now's the time for her to rally 'round!"

He gave the speedster all the side-thrust she would take; then, putting every available communicator tube behind a tight beam, he drove it sunward and began sending out a long-continued call to his fellows of Triplanetary's Secret Service.

NEARER and nearer the Nevian flashed, trying with all her power to intercept the speedster; and it soon became evident that, heavily laden though she was, she could make enough sideway to bring her within range at the time of meeting.

"Of course, they've got partial neutralization of inertia, the same as we have," Costigan cogitated, "and by the way he's coming I'd say that he had orders to blow us out of the ether—he knows as well as we do that he can't capture us alive at anything like the relative velocities we've got now. I can't give her any more side thrust without overloading the gravity controls, so overloaded they've got to be. Strap down, you two, because they may go out entirely!"

"Do you think that you can pull away from them, Conway?" Clio was staring in horrified fascination into the plate, watching the pictured vessel increase in size, moment by moment.

"I don't know, girl, but I'm going to try. Just in case we don't, though, I'm going to keep on yelling for help. In solid? All right, boat, DO YOUR STUFF!"

CHAPTER XIII

The Meeting of the Giants

"CHECK your blast, Fred, I think I hear something trying to come through!" Cleveland called out, sharply. For days the "Boise" had torn through the illimitable reaches of empty space, and now the long vigil of the keen-eared listeners was to be ended. Rodebush cut off his power, and through the deafening roar of tube-noise an almost inaudible voice made itself heard.

". . . . all the help you can give us. Samms—Cleveland—Rodebush—anybody of Triplanetary who can hear me, listen! This is Costigan, with Mis Marsden and Captain Bradley, heading for where we think the sun is, from right ascension about six hours, declination about plus fourteen degrees. Distance unknown, but probably hundreds of light-years. Trace my call. One Nevian ship is overhauling us slowly, another is coming toward us from the sun. We may or may not be able to dodge it, but we need all the help you can give us. Samms—Rodebush—Cleveland—anybody of Triplanetary. . . ."

Endlessly the faint, faint voice went on, but Rodebush and Cleveland were no longer listening. Sensitive ultra-loops had been swung, and along the indicated line shot Triplanetary's super-ship at a velocity which she had never before even approached; the utterly incomprehensible, almost incalculable velocity attained by inertialess matter, driven through an almost perfect vacuum by the "Boise's" maximum projector blast—a blast which would lift her stupendous normal tonnage against a gravity five times that of earth's! At the full frightful measure of that velocity the super-ship literally annihilated distance, while ahead of her the furiously driven, but scarcely faster spy-ray beam tore on in quest of the three Terrestrials who were calling for help.

"Got any idea how fast we're going?" Rodebush demanded, glancing up for an instant from the observation plate. "We should be able to see him, since we could hear him, and our range is certainly as great as anything he can have."

"No, can't figure velocity without any reliable data on how many atoms of matter exist per cubic meter out here." Cleveland was staring at the calculator. "It's constant, of course, at the value at which the friction of the medium is equal to our thrust. Incidentally, we can't hold it long. We're running a temperature, which shows that we're stepping along faster than anybody ever computed before. Taking Throckmorton's estimates it figures somewhere near the order of magnitude of ten to the twenty-seventh. Fast enough, anyway, so you'd better bend an eye on that plate. Even after you see him you won't know anything about where he really is, because we don't know any of the velocities involved —our own, his, or that of the beam— and we may be right on top of him."

"Or, if we are outrunning the beam, we won't see him at all. That makes it nice piloting."

"How are you going to handle things when we get there?"

"Lock to them and take them aboard if we're in time. If not, if they are fighting already—*there they are!*"

The picture of the speedster's control room flashed upon the plate and Costigan's voice greeted them from the speaker.

"Hello, fellows, welcome to our city! Where are you?"

"WE don't know," Cleveland snapped back, "and we don't know where you are, either. Can't figure anything without data. I see you're still breathing air. Where are the Nevians? How much time we got yet?"

"Not enough, I'm afraid. By the looks of things they will be within range of us in a couple of hours, and you're so far away yet that it took our voices four minutes and about fifty seconds to make the round trip, *on the ultra!* Play that on your calculator, Lyman! You haven't even touched our detector screen yet. I'm mighty glad to have seen you fellows again, though, anyway."

"A couple of hours!" In his relief Cleveland almost shouted the words. "That's time to burn. We can be clear out of the Galaxy in less than . . . ." He broke off at a yell from Rodebush.

"Broadcast, Conway, broadcast!" that worthy had cried, as Costigan's image had disappeared utterly from his plate.

Now he cut off the "Boise's" power, stopping her instantaneously in midspace, but the connection had been broken. Costigan could not possibly have heard the orders to change his beam signal to a broadcast, so that they could pick it up; nor would it have done any good if he had heard and had obeyed. So immeasurably great had been their velocity that they had flashed past the speedster without seeing it, even upon the ultra-plates, and now they were unknown billions of miles beyond the fugitives they had come so far to help—far beyond the range of any possible broadcast. But Cleveland had understood instantly what had happened. He now had a little data upon which to work, and his fingers were flying over the keys of the calculator.

"Back blast, maximum, seventeen seconds!" he directed, crisply. "Not exact, of course, but that'll put us close enough to find 'em with our detectors!"

Then for the calculated seventeen seconds the super-ship retraced her path, at the same awful speed with which she had come so far. The blast expired and there, plainly limned upon the observation plates, was the Nevian speedster.

"As a computer you're good," Rodebush applauded. "So close that we can't use the neutralizers to catch him. If we use a dyne of driving force we'll overshoot him a million kilometers before I can snap the switches out."

"And yet he's so far away and going so

fast that if we keep our inertia on it'll take all day at full drive to overtake him." Cleveland was frankly puzzled. "What to do? Shunt in a potentiometer?"

"No, we don't need it." Rodebush turned to the transmitter. "Costigan! We are going to take hold of you with a very light tractor. Don't cut it!"

"A tractor—inertialess?" Cleveland wondered.

"Why not?" Rodebush launched the tractor, set at its absolute minimum of power, and threw in his master switches.

While hundreds of thousands of miles separating the two vessels and the tractor beam was exerting the least effort of which it was capable, yet the super-ship leaped toward the smaller craft at a pace which covered that distance in the twinkling of an eye. So rapidly were the objectives enlarging upon the plates that the automatic focusing devices could scarcely function rapidly enough to keep them in place. Cleveland flinched involuntarily and seized his arm-rests in a spasmodic clutch as he watched this, the first inertialess space-approach; and even Rodebush, who knew better than anyone else what to expect, held his breath and swallowed hard at the unbelievable rate at which the two vessels were rushing together.

AND if these two, who had rebuilt the space-flyer, could hardly control themselves, what of the three in the speedster, who knew nothing whatever of the super-ship's potentialities? Clio, staring into the plate with Costigan, uttered a piercing shriek, as she sank her fingers into his shoulders. Bradley swore a mighty deep-space oath and braced himself against certain annihilation. Costigan stared for an instant, unable to believe his eyes, then his hand darted to the contacts which would cut the beam. Too late. Before his flying fingers could reach the studs the "Boise" was upon them; had struck them in direct central impact. Moving at the full measure of her unthinkable velocity though the super-ship was at the moment of impact, yet the most delicate recording instruments of the speedster could not detect the slightest shock as the enormous globe struck the comparatively tiny torpedo and clung to it; accommodating instantly and effortlessly her own terrific pace to that of the smaller and infinitely slower craft. Clio sobbed in relief and Costigan, one arm around her, sighed hugely.

"Hey, you space-fleas!" he cried. "Glad to see you and all that, but you might as well kill a man outright as scare him to death! So that's the super-ship, huh? SOME ship!"

"Hello, Conway!" "Clear ether, Conway!" The two scientists answered the hail of their fellow.

"I didn't realize that an inertialess approach would be quite such a terrifying spectacle, or I would have warned you," Rodebush went on. "Yes, thanks to you, the super-ship works as she should, at last. But you had better put on your suits and transfer. You might get your things ready. . . ."

"'Things' is good!" Costigan laughed, and Clio giggled sunnily.

"We've made so many transfers already that what you see us in is all we have," Bradley explained. "We'll bring ourselves, and we'll hurry; that Nevian is coming up fast."

"Is there anything on this ship you fellows want?" Costigan asked.

"There may be, but we haven't any locks big enough to let her inside and we haven't time to study her now. You might leave her controls in neutral, so that Lyman can calculate her position if we should want her later on."

"All right." The three armor-clad figures stepped into the "Boise's" open

lock, the tractor beam was cut off, and the speedster flashed away from the now stationary super-ship.

"Better let formalities go for a while," Captain Bradley interrupted the general introduction taking place. "I was scared out of nine years' growth when I saw you coming at us, and maybe I've still got the humps; but that Nevian is coming up fast, and if you don't already know it I can tell you that he's no light cruiser."

"That's so, too," Costigan concurred. "Have you fellows got enough stuff so that you think you can take him? You've got the legs on him, anyway—you can certainly run if you want to!"

"Run?" Cleveland laughed. We have a bone of our own to pick with that ship. We licked her to a standstill once, until we burned out a set of generators, and since we got them fixed we've been chasing her all over space. We were chasing her when we picked up your call. See there? She's doing the running."

The Nevian was running, in truth. Her commander had seen and had recognized the great vessel which had flashed out of nowhere to the rescue of the three Terrestrials; and, having once been at grips with that vengeful super-dreadnought, he had little stomach for another encounter. Therefore his side-thrust was now being exerted in the opposite direction; he was frankly trying to put as much distance as possible between himself and Triplanetary's formidable cruiser. In vain. A light tractor was clamped on and the "Boise" flashed up to close range before Rodebush threw on her inertia and Cleveland brought the two vessels relatively to rest by increasing gradually his tractor's pull. And this time the Nevian could not cut the tractor. Again that shearing plane of force bit into it and tore at it, but it neither yielded nor broke. The rebuilt generators of Number Four were designed to carry the load, and they carried it. And again Triplanetary's every mighty weapon was brought into play.

THE "cans" were thrown, ultra- and infra-beams were driven, the furious macro-beam gnawed hungrily at the Nevian's defenses; and one by one those defenses went down. In desperation the enemy commander threw his every generator behind a polycyclic screen; only to see Cleveland's even more powerful drill bore relentlessly through it. Punctured that last defense, the end came soon. A secondary SX7 beam was now in place on mighty Ten's inner rings, and one fierce blast blew a hole completely through the Nevian cruiser. Into that hole entered Adlington's terrific bombs and their gruesome fellows, and where they entered, life departed. All defenses vanished, and under the blasts of the "Boise's" projectors, now unopposed, the metal of the Nevian vessel exploded instantly into a widely spreading cloud of vapor. Sparkling vapor, with perhaps here and there a droplet or two of material which had only been liquefied.

So passed the sister-ship, and Rodebush turned his plates upon the vessel of Nerado. But that highly intelligent amphibian had seen all that had occurred. He had long since given over the pursuit of the speedster, and he did not rush in to do hopeless battle beside his fellow Nevians against the Terrestrials. His analytical detectors had written down each detail of every weapon and of every screen employed; and even while prodigious streamers of red force were raving out from his vessel, braking her terrific progress and swinging her around in an immense circle back toward far Nevia, his scientists and mechanics were doubling and redoubling the power of his already Titanic installations, to match and if possible to overmatch those of Triplanetary's super-dreadnought.

"Do we kill him now or do we let him suffer a while longer?" Costigan demanded.

"I don't think so, yet," replied Rodebush. "Would you, Lyman?"

"NOT yet," replied Cleveland, grimly, reading the thought of the other and agreeing with it. "Let him pilot us to Nevia; we might not be able to find it without a guide. While we're at it we want to so pulverize that crowd that if they never come near the Solarian system again they'll think it's twenty minutes too soon!"

Thus it was that the "Boise," under only a few dynes of propulsion, pursued the Nevian ship. Apparently exerting every effort, she never came quite within range of the fleeing raider; yet never was she so far behind that the Nevian space-ship was not in clear register upon her observation plates. Nor was Nerado alone in strengthening his vessel. Costigan knew well and respected highly the Nevian scientist-captain, and at his suggestion the entire time of the long and uneventful flight was spent in reenforcing the super-ship's armament to the iron-driven limit of theoretical and mechanical possibility.

Thus, when Nevia and her hot, blue sun appeared upon his plates Rodebush was ready for any emergency, and hurled his battleship upon the Nevian with every weapon aflame. But so was Nerado ready; and, unlike her sister-ship, his vessel was manned by scientists well versed in the fundamental theory of the weapons with which they fought. Beams, rods, and lances of energy flamed and flared; planes and pencils cut, slashed, and stabbed; defensive screens glowed redly or flashed suddenly into intensely brilliant, coruscating incandescence. Crimson opacity struggled sullenly against violet curtain of annihilation. Material projectiles and torpedoes were launched under full beam control; only to be exploded harmlessly in mid-space, to be rayed into nothingness, or to disappear innocuously against impenetrable polycyclic screens. Both vessels were equipped completely with iron-driven mechanisms; both were manned by scientists capable of wringing the last possible watt of power from their sources. They were approximately equal in size, and each now wielded the theoretical ultimate of power for her mass; therefore neither could harm the other, furiously though each was trying. And more and more nearly they were approaching the red atmosphere of the world of the amphibians. Down into that crimson blanket the two warring space-ships dropped, down toward a city which Costigan recognized as that in which Nerado made his headquarters.

"Better hold off a bit," Costigan cautioned. "If I know that bird at all, he's cooking up something," and even as he spoke there shot upward from the city a multitude of flashing balls. The Nevians had mastered the secret of the explosive of the fishes of the greater deeps, and were launching it in a veritable storm against the Terrestrial visitor.

"Those?" asked Rodebush, calmly. The detonating balls of destruction were literally annihilating even the atmosphere beyond the polycyclic screen, but that barrier was scarcely affected.

"No, that," pointing out a hemispherical dome which, redly translucent, surrounded a group of buildings towering high above their neighbors. "Neither those high towers nor those screens were there the last time I was in this town. They're stalling for time down there, that's all those fireballs are for. Good sign, too—maybe they aren't ready for us yet. If not, you'd better take 'em while the taking's good; and if they *are* ready for us, we'd better get out of here while we're all in one piece."

AND in fact Nerado had been in touch with the scientists of his city; had been instructing them in the construction of converters and generators of such weight and power that they could crush even the defenses of the superships. They were not, however, quite done; the entirely unsuspected possibilities of speed inherent in absolute inertialessness had not entered into Nerado's calculations.

"Better drop a few cans down on that dome, fellows, before they make trouble for us," suggested Rodebush to his gunners.

"We can't," came Adlington's instant reply. "We've been trying it, but that's a polycyclic screen. Can you drill it? If you can, I've got a real bomb here—that special we built—that will do the trick if you can protect it from their beams until it gets down into the water."

"I'll try it," Cleveland answered, at a nod from the physicist. "I couldn't drill Nerado's polycyclics, but I couldn't use any momentum on him. Couldn't ram him—he fell back with my thrust. But that screen down there can't back off, so maybe I can work on it. Get your special ready, and hang on, everybody!"

The "Boise" looped upward, and from an altitude of miles dove downward through a storm of force-balls, rays, and shells; a dive checked abruptly as the hollow tube of energy, which was Cleveland's drill, snarled savagely down ahead of her and struck the shielding hemisphere with a grinding, lightning-splitting shock. As it struck, backed by all the enormous momentum of the plunging space-ship and driven by the full power of her mightiest generators, it bored in, clawing and gouging viciously through the tissue of that rigid and unyielding barrier of pure energy. Then, mighty drill and plunging mass against iron-driven wall, eye-tearing and furiously spectacular warfare was waged. Well it was for Triplanetary, that day, that its super ship carried ample supply of allotropic iron; well it was that her originally Gargantuan converters and generators had been doubled and quadrupled in power on the long Nevian way! For that oven-girdled fortress was powered to withstand any conceivable assault; but the "Boise's" power and momentum were now inconceivable, and every watt and every dyne was solidly behind that hellishly flaming, that voraciously tearing, that irresistibly ravening cylinder of energy incredible!

Through the Nevian shield that cylinder gnawed its frightful way, and down its protecting length there drove Adlington's "Special" bomb. "Special" it was indeed; so great of girth that it could barely pass through the central orifice of Ten's mighty projector, so heavily charged with sensitized atomic iron that its detonation upon any planet would not have been considered for an instant if that planet's integrity meant anything to its attackers. Down the shielding pipe of force the "Special" screamed under full propulsion, and beneath the surface of Nevia's ocean it plunged.

"Cut!" yelled Adlington, and as the scintillating drill expired, the bomber snapped his detonating switch.

FOR a moment the effect of the explosion seemed unimportant. A dull, low rumble was all that was to be heard of a concussion that jarred red Nevia to her very center; and all that could be seen was a slow heaving of the water. But that heaving did not cease. Slowly, *so* slowly it seemed to the observers now high in the heavens, the waters rose up and parted; revealing a vast chasm blown deep into the ocean's rocky bed. Higher and higher the lazy mountains of water reared; effortlessly to

pick up, to smash, to grind into fragments, and finally to toss aside every building, ever structure, every scrap of material substance pertaining to the whole Nevian city.

Flattened out, driven backward for miles the tortured waters were urged, leaving exposed bare ground and broken rock where once had been the ocean's busy floor; while tremendous blasts of incandescent gas raved upward, buffeting even the enormous masses of the two space-ships, poised by their breathless crews so high above the site of the explosion. Then the displaced millions of tons of water rushed back into that newly rived pit, seeming to seek in that mad rush to make even more complete the already total destruction of the city. The raging torrents poured into that yawning cavern, filled it, and piled mountainously above it; receding and piling up, again and again, causing tidal waves which swept a full half of Nevia's mighty, watery globe.

THE city forever silenced, Rodebush again directed his weapons upon Nerado's vessel, but the Nevian was no longer fighting. For the first time in that long and bitter engagement, not a Nevian beam was in operation. His screens, however, were as capable as ever, and after a few fruitless attempts to make an impression upon them, Rodebush cut off his own offensive and turned to Costigan.

"What do you make of it, Conway? You know these people better than we do; what are they up to?"

"I wish to talk to you," Nerado's voice came from the speaker, "and I could not do so while the beams were operating. You are, I now perceive, a much higher form of life than any of us had thought possible; a form perhaps as high in evolution as our own. It is a pity that we did not meet you when we first neared your planet, so that much life, both Tellurian and Nevian, might have been spared. But what is past cannot be recalled. As reasoning beings, however, you will see the futility of continuing a combat in which neither of us is capable of injuring the other. You may, of course, destroy more of our Nevian cities, in which case I should be compelled to go and destroy similarly upon your earth; but, to reasoning minds, such a course of procedure is sheerest folly."

Rodebush cut the communicator beam.

"Does he mean it?" he demanded of Costaigan. "It sounds reasonable, but . . ."

"But fishy." broke in Cleveland. "Altogether too reasonable for a . . ."

"Yes, he means it; every word of it," interrupted Costigan in turn. "That's the way they are. Reasonable, passionless. Funny—they lack a lot of things we have, but they've got a lot of things that I wish more of us Tellurians had too. Give me the plate—I'll talk for Triplanetary," and the beam was restored.

"Captain Nerado," he greeted the Nevian commander. "Having been with you and among your people, I know that you mean what you say and that you speak for your race. Similarly, I believe that I can speak for the Triplanetary Council—the government of three of the planets of our solar system—in saying that there need be no more conflict between our peoples. I also was compelled by circumstances to do certain things which I now wish could be undone; but as you have said, the past is past. Our two races have much to gain from each other by friendly exchanges of materials and of ideas, while we can expect nothing except mutual extermination, if we elect to continue this warfare. I offer you the friendship of Triplanetary. Will you release your

screens and come aboard to sign a treaty?"

"I will come; my screens are down." Rodebush likewise cut off his power, although somewhat apprehensively, and a Nevian lifeboat entered the main airlock of the "Boise."

THEN, at a table in the control room of Triplanetary's first super-ship, there was written the first Inter-Systemic Treaty. Upon one side the three Nevians; amphibious, cone-headed, loop-necked, scale-bodies, four-legged things to us monstrosities: upon the other the three humans, air-breathing, rounded-headed, shortnecked, smooth-bodied, two-legged creatures equally monstrous to the fastidious Nevians. Yet each of these representatives, of two races so different, felt respect for the other race increase within him minute by minute as the conversation went on.

The Nevians had destroyed Pittsburgh, but Adlington's bomb had blown an equally populous Nevian city out of existence. One Nevian vessel had wiped out an entire unit of Triplanetary's fleet; but Costigan, practically unaided, had depopulated one Nevian city and had seriously damaged another. He had also beamed down many Nevian ships. Therefore loss of life and material could be balanced. The Solarian system was rich in iron, to which the Nevians were welcome; red Nevia possessed abundant stores of substances which upon earth were extremely rare and of vital importance. Therefore commerce was to be encouraged. The Nevians had knowledges and skills unknown to earthly science, but were entirely ignorant of many things, to us commonplace. Therefore interchange of students and of books was highly desirable. And so on.

Thus was signed the Triplanetario-Nevian Treaty of Eternal Peace. Nerado and his two companions were escorted ceremoniously to their vessel, and the "Boise" took off in an inertialess dash toward earth, bearing the good news that the Nevian menace was no more.

Clio, now a hardened space-flea, immune even to the horrible nausea of inertialessness, wriggled lithely in the curve of Costigan's arm and laughed up at him.

"You can talk all you want to, Conway, but I don't like them a bit. They give me the purple jitters! I suppose that they are really estimable folks; talented, cultured, and everything; but just the same I'll bet that it will be a long, long time before anybody on earth will really, truly *like* them!"

THE END

THE LOST CITY

MILTON R. PERIL'S

impressive story of a lost people

A New Serial Commencing in the May Issue

The Mentanicals

By FRANCIS FLAGG

The name of this story gives a clue to its topic. It really seems to suggest a name for a new party, and possibly with all the intellect now being lavished on the government it might be adopted for immediate use. It is certainly most suggestive in substituting for the physical basis of mechanics, the spiritual basis of mind. The readers will find in it a new development of the most suggestive kind presented in a most amusing way.

Illustrated by MOREY

THIS is a strange story, and if you are the kind of person who believes nothing without overwhelming proof, read no further, for the story is an incredible one and centers around characters widely divergent as to background and walks of life—Bronson, Smith and Stringer.

Bronson was by way of being an adventurous man, one who had sailed the seven seas, first as fo'cas'le hand, then as mate and skipper of rusty tramps for Chinese owners in the Orient. Yet he was by no means uneducated, though the knowledge he possessed on a wide range of subjects seldom met with in the repertoire of that type of tramp captains, had been gleaned from books and not from colleges. Olson Smith had picked him up—I never rightly understood when or how—in the Indian Ocean and made him captain of his sleek ocean liner masquerading as a yacht. Olson Smith could afford the luxury of thousand ton yachts, because his father had been canny enough to get into a packing-house combine at the right moment and so turn an already sizable fortune into millions. Olson himself, however, had nothing to do with the packing business aside from helping to spend its profits. He was a dilettante of sorts, a patron of the arts, a stout, distinguished looking gentleman under sixty, who endowed colleges and founded chairs and laboratories for research work. Through these benevolences he became acquainted with Professor Stringer, the physicist, whose remarkable achievements in his chosen field (which also covered mathematics) had won him an international reputation. Professor Stringer was not a "popular" scientist, his abstruse and remarkable paper on "The Electronic Flow and Its Relation With Time" being practically unknown to the general public. But among his colleagues he was regarded with great respect for his actual discoveries in the realm of physics; and even though many of them looked askance at the radical theories advanced in his paper, portions of the paper itself were received as a genuine, if somewhat abstract, contribution to knowledge.

Olson Smith read the paper. How much of it he understood is a moot question. As the secretary of his benefactions I was instrumental in bringing it to his attention. "Here," I said, "is a chance to do something for pure science." He was not at first inclined to be interested. "The thing," he said, "is moonshine, pure moonshine."

"For heaven's sake, man!" The Professor tried to reach his side.
"Careful, you fool! Careful! Don't touch anything!"

"Perhaps so," I replied; "but you must remember that the moonshine often precedes the practical science. Consider, sir. . . ." He considered; and after due reflection loosened the purse-strings.

PROFESSOR Stringer graciously allowed himself to be endowed. He was (one sensed) fed up with wasting his genius on unappreciative college students; and he wanted money, much money, a million dollars he said, to carry out his experiments. But he made it clear that he was honoring Olson Smith by allowing him to donate the money; and strangely enough—for Olson Smith was a plutocrat convinced of his own weight and importance—the magnate agreed. The personality of Professor Stringer—and this dried-up wizened little scientist in the middle fifties possessed a dynamic personality—carried all before it. Olson Smith turned over to him his Long Island home, built workshops and laboratories, and then left him to the seclusion and privacy he desired, taking his annual trip to the Bermudas. What with one thing and another we did not see Professor Stringer again until a year later, when the yacht tied up at the private pier of the Long Island estate and we dined with him. Besides Olson Smith, Professor Stringer and myself, three others were present that night, a middle-aged business man named Gleason, ruddy of face from constant shampooing and good living, a noted surgeon who does not wish his name or description given here, and Captain Bronson of the steam-yacht. Perhaps I have failed to mention that Captain Bronson was a remarkably handsome man, somewhere under forty, whose medium height and slender figure belied the great physical strength that was really his. He certainly did not look the two-fisted fighter, the dubious hero of shady exploits, that Olson Smith declared him to be. The multimillionaire was scarcely one to make friends of his hired men, be they valets or private secretaries, but between himself and Bronson an undoubted intimacy existed, based, perhaps, on the dual nature of the Captain. Bronson was capable either of fighting or of discussing the merits of a Pulitzer prize winner: a sort of Wolf Larsen of a fellow, but more versatile and amenable than Jack London's character.

There was drink that night of course, wines, liqueurs, and a very good brandy, all brought from the boat, but the Professor touched nothing. "A scientist must have a clear head," he said, "and alcohol is not conducive to that—no—" But he drank coffee, and when the servants had served it and left us alone, he began to talk, almost musingly. "Time," he said, "is the great enigma, the phenomenon that captivates the imagination. We travel in it from the cradle to the grave, and yet," he said, "what do we know of time? Nothing," he said, "nothing, save that it is related to space." He paused and looked at us all half-dreamily. "As you know I have discovered a force that I call the Electronic Flow, and that force I have related to the phenomenon of time. I am convinced—in my various papers on the subject I have sought to show—that the Electronic Flow, being to all intents and purposes the absolute as far as we are concerned, is capable of bearing us on its bosom into the future. Or rather its tremendous speed is capable of holding us suspended at the core of things, while the phenomenon of time. . . ." He broke off and regarded us more directly. "Really," he said, "I don't know as I am making this subject very clear. But you must understand," he said, "that there are points, on which I am not very clear myself. Whether the speed of the electronic flow carries one

forward into time, or the speed of time passes one held in the electronic flow, is a question difficult to answer. Yes," he said, "very difficult to determine. Of course I did not start my recent investigations with any intention so radical as building a Time Machine. Not at first," he said. "My intentions were merely to verify mathematically some further theories, and to demonstrate. . . ." He mused a moment. "But do you know the idea of an actual Time Machine grew on me? It were," he said, "as if something whispered in my very brain and drove me on. I can't describe it. Foolishness of course. But I built the Time Machine." He looked at Olson Smith. "Yes," he said, "I built the Time Machine. It lies in the laboratory yonder; and to-night—to-night," he said, "I am going to demonstrate it for the first time!"

THE business man was one of those beefy individuals who stare into whiskey glasses, and make strange noises in their throats when they fail to understand anything. "Stuff and nonsense," he said now, "stuff and nonsense."

Bronson stared at him. "Oh, I don't know."

"But to travel in time!"

"It does sound absurd."

"Absurd," said the famous doctor.

"And yet you know what they said about iron steamships sinking and heavier-than-air flying machines."

"That was different."

"Different," I said with conviction.

". . . in my time," said Olson Smith; "building time machines." He looked reproachfully at his glass. "Will some one," he asked, "pass the brandy?"

The brandy was passed.

We were all drinking; more than was good for us perhaps. The Professor put down his coffee cup and addressed himself to Olson Smith. "In a sense," he said, "a financial sense, this time machine is yours. If you care to see it demonstrated . . ." he stood up.

The business man did not stir. He muttered something about damn-fool nuts and snorted into his glass. But the rest of us were interested. A fresh breeze was blowing off the water, as we passed from the house to the laboratory, and helped, partially, to dissipate the fumes of alcohol. Professor Stringer threw open the laboratory door and turned on the lights. We saw it then, an odd machine, shiny and rounded, occupying the center of the workshop floor. I had been drinking, you will recollect, and my powers of observation were not at their best. It was the same with the others. When I questioned them later, they could give no adequate description of it. "So this," said Olson Smith rather flatly, "is a time machine." The doctor walked about—a little unsteadily I noticed—and viewed it from all angles. "The passenger," said the Professor, "sits here. Notice this lever on the graduated face of the dial; it controls the machine. Turn it this way from Zero and one travels into the past; throw it ahead and one travels into the future. The return of the lever to Zero will return the machine to the point of departure in time. The electronic flow. . . ." he went into obscure details.

"Will it work?" demanded the Doctor.

"According to the equation. . . ."

"Equations?"

". . . it cannot help but function."

"If time travelling were possible."

Bronson laughed loudly. "To travel in time! That *would* be an adventure."

"On paper," jibbed the Doctor.

Bronson laughed again. "We'll see about that."

ALL of us were a little drunk, I tell you, and despite the respect we felt for Professor Stringer as an emin-

ent scientist, no one believed in his time machine. I am quite certain that Bronson didn't. Or did he?. I have sketched his background and there is little doubt that by temperament and training he was a wild and reckless fellow, one given to doing bizarre things and taking desperate chances. With a quick movement that no one anticipated he stepped forward and seated himself in the passenger seat of the odd contrivance. I can see him yet, his face flushed, his eyes brilliant, his mop of dark hair disordered. "All aboard for the future!" he shouted recklessly.

"For heaven's sake, man!" The Professor tried to reach his side. "Careful, you fool! careful! Don't touch anything!" But Bronson grasped the lever and pushed it, pushed it abruptly ahead. How can I describe what followed? There was a chaotic moment when the machine spun—we saw it spinning, a blurred mass. A sudden wind rushed through the room in quick fury, raged, subsided, and left us staring in dumb amazement and fear at an empty spot. The machine—and Bronson with it—had vanished before our eyes!

That was on June the first, a little before midnight, and five days passed, five days, during which Bronson was lost to his own time and place.

Ahead of us in time! That was the implication.

Close to the machine when Bronson turned the lever, Professor Stringer had been thrown to the floor, his head struck by a portion of the machine as it whirled into invisibility. We picked him up, unconscious, and for days he hovered on the verge of death. The next morning the business man went his way to the city, ignorant of what had occurred. "Time machines," he chortled, "time machines," and smiled fatly. But the rest of us settled down to wait for we knew not what, and on the fifth day occurred the terrific explosion by the old stone wall, a half mile from the workshop, and when we hurried there, it was to find Bronson entangled in a wreckage of steel and other metals. We hauled him forth. His clothes were in shreds, his body terribly bruised and battered, and it was some time before he could be made to realize where he was. "Brandy!" he exclaimed; "for God's sake give me brandy!" We gave him brandy and other things, and the doctor patched him up, and we rushed him to a hospital, where in time he recovered from the shock and his broken bones knit. But the beauty that had been his was forever marred by a livid scar diagonally crossing the nose and running to the bulge of the jawbone. He fingered it as he told us of his incredible adventure.

II

Bronson's Story

TIME (he said) is the great phenomenon, I know that, but to travel in it—ah, that seemed impossible to the point of absurdity. I had read H. G. Wells' "The Time Machine," as who has not, deeming it fantastic fiction. Wells' story *is* fantastic fiction, of course, though scarcely as fantastic as what I experienced.

When I seated myself in the Professor's time machine that night and pushed over the lever, I have no need to tell you that I was in a drunken and reckless mood. The room turned around me like a pin-wheel, dissolved into mist. I was conscious of the terrible vibration of the machine, of a deathly sickness at the pit of my stomach. Blackness followed the mist. Wells describes what the character in his story saw as he journeyed into the future, the procession of days and nights ever accelerating their motion, but I saw nothing like that, per-

haps from the beginning the speed was too great. Terrified, bewildered, I yet retained enough presence of mind to depress the lever into neutral and so bring the machine to a halt. Moments passed while I lolled in my seat, blind, dazed; then my vision cleared—and I could see. It was day. Sunlight fell around me. Everything was strange—and different. How can I make you see what I saw? The machine stood near one end of a great, open square that was surrounded by massive buildings. Those buildings! I had never seen their like before. And yet there was a similarity of line, of mathematical precision which linked them with the architecture of New York and Chicago. It was as if the building construction of to-day had been carried to an extreme length. *As if the machine had carried it forward.* I did not think that at the moment, but later. . . .

The walls of the massive buildings were broken by yawning doorways. So this, I thought, is the future; it can be nothing less than that. I stepped out of the machine, holding on to it for support, still feeling terribly sick and giddy. Then I saw the cylinders! They came gliding from one of the openings in an upright fashion, and this was the singular thing about them, that their means of locomotion were not apparent to the eye. There were no wheels or treads. They appeared to skim the stone or concrete with which the square was paved, rather than touch it. Oddly repellant they were, and intimidating, and I loosened the automatic in its shoulder holster—the small one I always carry—and prepared for emergencies, though bullets were useless against the cylinders as I was to discover later.

THE cylinders were smooth things about five feet tall, of a dulled metal hue, with here and there shining spots which constantly waxed and waned in color. They were machines—I thought of them as machines—and it was reasonable to suppose that behind them lurked a human intelligence. The people of the future, I thought, have invented devices unknown to us of the Twentieth Century; and it came over me how wonderful it was going to be to meet those superior people, talk to them, gaze upon the marvels with which they had surrounded themselves.

So I went to meet the cylinders.

Their soft whispering meant nothing to me at first. Nor at first did I suspect the source of the gentle pressure running over me from head to foot, as the cylinders came close. Then with an odd thrill of apprehension I realized that the curious cylinders were handling, examining me, that from them emanated an electrical force, a manipulation of invisible rays which functioned as organs of touch. Alone, bewildered, trying vainly to comprehend the strange situation, I had to call on every ounce of my self-control to remain calm. Yes, I was afraid—only the fool says he never is—but more afraid of being afraid, of showing fear. I still believed that behind those cylinders must lurk a human intelligence. The genius of the race seemed to run along the line of making robots. There was the "metal brain" at Washington, that told of the tides, the electrical eye which watched a thousand industrial processes, a myriad automatic devices functioning with little or no supervision from man; and of course I had read the play "R. U. R.," science fiction stories dealing with the future of machinery, and it was inevitable—strange, and yet not so strange—that I should expect an advancement, a realization of all those things in the future. Man the inventor, I thought, had achieved them; and for a moment this belief seemed borne out when I saw the men.

They were in one of the buildings, and the city of buildings, which I was soon to know, lay on all sides of and beyond the square. I did not struggle when the cylinders lifted and carried me away. That is, I ceased my involuntary resistance almost at once. It was useless to struggle against a force far superior to my own puny strength; besides I believed the robots were carrying me to their human masters.

The building into which I was taken —through an arched opening—was a vast place; too vast, too overwhelming for me to describe save in the vaguest, most general terms. You know how it is when you see something stupendous, something so intricate that you are bewildered by its very complexity. There was a huge room filled with almost noiseless machines rooted in their places like shackled monsters, or going to and fro on cables and grooves which determined their spheres of activity. Strange lights glowed, weird devices toiled; but I can tell you no more than that; I saw them for too short a time.

The men were among those machines. At sight of them my heart leapt. Here, I thought, is the human intelligence back of the wonders I view, the masters of the cylindrical robots; yet even at that moment I was aware of a doubt, a misgiving.

One of the men shambled forward. His blond hair—long and matted—fell over the forehead and he brushed it back with a taloned hand and stared at me stupidly. "Hello!" I said, "what place is this, what year? Tell these robots of yours to let me go."

He was naked and thin, his skin of a greenish pallor, and save for a mouthing of toothless gums, vouchsafed me no answer. Chilled by his lack of response my heart fell as suddenly as it had leapt. Good God! I thought, this can't be master here, this pitiful thing. The cylinders seemed watching attentively, *listening*. I don't know how, but they gave me that impression; and now I noticed that the shining spots on them were glowing intensely, that their whispering was not a steady but a modulated sound. As if it were language, I thought, language! and a strange dread came over me and I shivered as if with cold. Other men, perhaps a dozen in number came forward, naked and shambling, with stupid beast-like looks on their faces and rumblings in their throats. In vain I endeavored to communicate with them, human intelligence seemed dead back of their lack-luster eyes. Filled with rising horror, I squirmed in the grip of the cylinders and suddenly their hold on me relaxed and I tore myself free and fled, possessed with but one overwhelming desire, and that was to win to the time machine, leave this uncanny future and return to my own day and age. But the arched opening leading to the square had vanished, blank wall rose where it had been. The cylinders appeared to watch me with cold impersonal watchfulness. The thought of being marooned among them in this incredible and alien future brought the chill sweat to my forehead, but I did not lose my head. Perhaps the closing of the doorway had not been a calculated thing; perhaps if I awaited events with caution and patience the door would re-open; meantime I could search for other exits.

BUT other exits did not give on the square I desired. I discovered but two of them anyway, though there may have been many more, one leading into a dark, forbidding tunnel, the other giving access to a second square entirely surrounded by buildings. I was afraid to venture into other buildings for fear of going astray, of losing the neighborhood of the time machine. Filled with what feelings you can imagine, I re-

turned to the first doorway (through which I had been carried) to find it still closed. Then I thought of the beast-like men. Perhaps they possessed knowledge that might be helpful to me; perhaps after all I could succeed in communicating with them. It was hazardous work penetrating any distance in that maze of almost noiseless and ever-toiling mechanisms, but I followed in the footsteps of the timidly retreating beast-men and so at last came to a kind of squatting place in the midst of the machinery, which locality appeared to be their place of abode, since a number of women with children cowered there, and the men showed a disposition to pause and dispute my further progress. At the edge of the squatting place I seated myself, my automatic ready for action, and lit a cigarette. I know of nothing that soothes the nerves like nicotine. Slowly the beast-men drew near me. I smiled and made peaceful gestures. Some half-grown children crept closer and fingered my clothes. They were eating, I noticed, a kind of biscuit which they took at will from a scuttle-like machine, and chewing small pellets. Water ran through a huge metal trough with a subdued roar. After awhile I got up and went to the trough to satisfy a growing thirst, helping myself at the same time to biscuits from the scuttle. They were rather flat in flavor—lacking salt perhaps—and possessed a peculiar taste I did not like. The pellets were better. They too were obtained from a scuttle-machine (I can call them nothing else) and were pleasant to chew. I soon discovered that swallowed at regular intervals one of them gave all the sensations of having partaken of a hearty meal. I had eaten an hour—or was it twenty centuries?—before, but ate again, feeling ravenously hungry. Probably the pellets represented a dehydrated method of concentrating foods, far in advance of that utilized in the preparation of certain foodstuffs today. Be that as it may, I filled my pockets with them, and I dare say if you were to search the clothes I returned in you will find some of those pellets.

I SPENT several hours at the squatting place of the beast-men trying to talk to them, but without success. Seemingly they were as are the animals of the field, lacking coherent language, men who had somehow lost the power to talk, to think, the ability to grasp the meaning of simple signs, such as possessed by the lowliest aborigine to-day. In vain I speculated as to the reason for this. That the cylinders were somehow responsible I felt certain. Man, I thought, had developed the robot, the automatic machine, until the human worker was ejected from the industrial process and cast out to degenerate and perish, the beast-men being a surviving remnant of those toilers. This reasoning seemed plausible enough at the time, though it left much to be desired, for, in the twentieth century from which I had come, wasn't the machine replacing human workers with a ruthlessness suggestive of what I found in the future? How right I was in my reasoning, and how wrong, you will shortly see.

Thinking thus it was natural that I should again turn my attention to the cylinders. Never once had I been free from their observation, or unconscious of it. Through them, I thought, I shall contact the rulers of this realm, the human masters whose servants they are, the pitiless ones who have doomed a portion of humanity to beast-hood and extinction. So I grimly waited—a prey to what emotions you can imagine—observing the beast-men, watching the blank wall for the possible opening of the way to the square and the time machine, and all the time aware of the

coming and going of those cylinders. Time passed; how much of it I had no means of telling, since my wrist-watch refused to run; but a long time; and finally I grew tired of waiting for the cylindrical robots to communicate my presence to their masters, or to conduct me there, and decided to seek their presence myself.

By way of the opening already alluded to, I gained access to the second square. The squares were a peculiar feature of the place, as I was soon to learn. There were no streets or roads leading from square to square; the squares were isolated with radiating arteries always ending against some building—at least those did, that I explored.

Dusk was falling as I entered the square. Indescribably lonely it was, lonely and weird, to look up and see the stars blazing far overhead. I followed one radiating artery to a blank wall; another, another. Then suddenly I was too tired to proceed further and returned to the vicinity of the closed door, where I lay down at the base of the blank wall and fell asleep.

The next morning I filled my pockets with pellets and again started out. Square after square I passed through, and building after building. The cylinders were everywhere but did not interfere with my movements. A group of them constantly accompanied me, but whether always composed of the same cylinders I could not tell. Their incessant whispering was a nerve-wracking thing, and I often felt like turning on them and shooting.

I WISH I could tell you all I saw: buildings full of toiling machinery and now and then a score or so of beast-men; squares and radiating arteries without a blade of grass or a tree, and never an animal, a bird, or an insect. On that first day of exploration, despite every precaution, I lost my way—hopelessly—and spent futile hours trying to retrace my steps. I have been lost in tropical jungles. There was that time in Siam. But never before had I felt so panic-stricken. Remember, I was an alien creature in an incredible future, separated from the only means of returning to my own place and time. One square was like another, one building similar to its neighbor. Soon I gave up the vain effort to return to my starting point. My sole hope now lay in finding the rulers of this bewildering maze.

That night—I knew it was night when darkness fell in the squares—I slaked my thirst with a trickle of water running from a pipe, swallowed a pellet, and almost instantly sank into the sleep of exhaustion.

The next day I came to a part of the city free of the beast-men. The squares were larger, the radiating arteries were spendid roads, but in the midst of many squares stood circular buildings not met with before. I entered one of them and was surprised to find huge rooms filled with pieces of rusted tools, shovels, spades, chisels, hammers, axe-heads, all displayed in a kind of chronological order. The thought of its being a museum did not occur to me at once. It was only after a while that I exclaimed to myself, "Why this looks like a museum!" Then the inevitable conviction came: "It is a museum!" But who could have arranged it? Certainly not the witless beast-men, and of other men I had seen nothing. This failure to find human beings, on a par with the stupendous buildings and machines all around, filled me with anxious forboding. I gazed at the cylinders. For the first time it came over me that they were the only universal inhabitants I had seen. Bewildered, amazed, I wandered from building to building, and from floor to floor (for

some of the buildings had as many as a dozen floors accessible to myself, gained not by stairways, but by gradually mounting run-ways or ramps in circular wells), engrossed in what I saw, forgetting for the nonce my terrible plight.

There were chambers filled with fragments of machines such as cash-registers, clock-wheels, gasoline engines, and similar devices. Nothing was complete; nearly everything showed the wear and tear of time. And there were others containing various machines more or less correctly reassembled from ancient parts: automobiles, for instance, and locomotives; with an arrangement of simpler mechanical forms leading to more complex ones. I couldn't comprehend why all those things had been gathered together for preservation and display; nor account for the age of them, their general condition of ruin.

Not on that day, nor on the next—it was on the last day that I spent in the strange future—did I come to the library. And here I must touch on another phase of my adventure. You can have no idea how horrible it became at times to be alone among hundreds, yes, thousands of whispering cylinders. I was always aware of their subtle and invisible touch. Have you ever felt the antennae of an insect? Like that it was, like that. I recall one time on the Gold Coast. . . . Only it bolstered up my tottering sanity and control to gaze now and then on creatures similar in structure to myself, even if they were but the soulless beast-men of the machines. For in all that vast and intricate city they were the only human beings I could discover, and I began to suspect, to dread, I scarcely knew what.

I CAME to the library, I say, on that last day. I did not know it was a library at first—and perhaps I was mistaken in believing the odd metal disks arranged in piles on shelves and tables, and consulted by the cylinders, to be a species of recording plates—but it was here I found the books. They were in boxes of thin metal, the better evidently to protect them from injury.

The thrill of seeing those books! Old, they were, old, covers gone, pages torn and missing; but they were books and magazines, though few in number, and I examined them eagerly. All this time the cylinders were following me, watching me, as if weighing my actions, and all the time I fought back a feeling of weirdness, uncanniness. Unnerving it was, intimidating. I had the feeling that in some perfectly incomprehensible way my actions were being controlled, directed. Experimenting, I thought, that's what they're doing, experimenting with me. But you mustn't get the idea that I realized or suspected this at first. Even up to that moment I was still thinking of the cylinders as automatic devices without intelligence or reason, and it must be kept in mind that, if I speak of them from time to time as if understanding their true nature from the beginning, I am speaking as one who looks back upon past happenings from the vantage-point of later knowledge.

The books and magazines were typed in English! I was amazed of course, seeing English print at such a time and place. The whispering of the cylinders rose louder and louder as I examined a book. The title page was gone. It dealt with a dry subject—physics evidently—which interested me little. I turned from the books to the magazines. One was dated 1960. Nineteen-sixty! March of that year. And the place of publication was given as New York. I could not help but marvel at this, for 1960 was still twenty-six years in the future when I left that night on the time machine, and to judge by the yel-

lowing pages of the magazine it was old, old. It was difficult to decipher the print, many of the pages being torn and defaced; but a portion of an article I was able to read. "In 1933," stated the unknown writer, "the first mechanical brain-cell was invented; with its use a machine was able to learn by experience to find its way through a maze. To-day we have machines with a dozen mechanical brain-cells functioning in every community. What is this miracle taking place under our eyes, what of good and of ill does it bode to its creators?"

MARVELING much, I turned to another magazine in much the same condition, but this time lacking date or title page, where I gleaned the following:

"Man is not a machine in the purely mechanical sense, though many of his functions are demonstrably mechanical. The ability to reason, however it has evolved, whatever it may be at bottom, whether a bewildering complexity of reflex actions or not, lifts man above the dignity of—a machine. Does this imply the impossibility of creating machines (mechanical brains) that can profit by experience, go through the processes which we call thought? No; but it does imply that such machines (however created) are no longer mere mechanisms. There is here a dialectical process to be reckoned with. Machines that 'learn' are living machines."

Living machines! I mouthed that phrase over and over to myself—and mouthing it I looked at the cylinders with increasing dread. They were machines. Were they . . . could they . . . But it took the story in the third magazine (which like the others was woefully delapidated, with many pages and pieces of pages missing) to clarify my thought. Story—I call it that—based on fantasy, perhaps, and a little substratum of fact. So I thought at first. I have a good memory; but of course I do not claim that everything I repeat is given exactly as I read it. The story (article) was titled "The Debacle" and the author's name given as Mayne Jackson. I repeat with what fidelity I can.

"Little did the people of the latter half of the twentieth century realize the menace to humanity that resided in the continuous development of automatic machinery. There was that curious book of Samuel Butler's, "Erehwon," which provoked comment but was not taken seriously. Over a period of years the robot marched into action as a mechanical curiosity. It was not until the genius of Bane Borgson—and of a host of lesser known scientists—furnished the machine with brain-cells and so made it conscious of itself, as all thinking things must become, that the Mentanicals (as they were called) began to organize and revolt. Man—or rather a section of mankind, a ruling and owning class—had furthered his immediate interests and ultimate doom by placing Mentanicals in every sphere of industrial and transportation activity. Seemingly in need of neither rest nor recreation, they became ideal (and cheap) workers and servants, replacing millions of human toilers, reducing them to idleness and beggary. The plea of many thinkers that the machines be socialized for the benefit of all, that the control of them be collective and not individual (that is, anarchic) went unheeded. More and more the masters of economic life called for further specialization in the brain-cells of the Mentanicals. Mentanical armies marched against rebellious workers and countries, and subdued them with fearful slaughter.

"But the revolt of the Mentanicals themselves was so subtle, so insidious, so (under the circumstance) inevitable, that for years it went unnoticed.

"EVERYTHING had been surrendered into their power—or practically everything: factories, means of communication, raising of food supplies, policing of cities—everything! When the stupid ruling class at last awoke to a knowledge of its danger, it was to late to act—mankind lay helpless before the monster it had created.

"The first warning vouchsafed to men was the whispering of the Mentanicals. Heretofore they had been silent save for the slight, almost inaudible purr of functioning machinery within them, but now they whispered among themselves—whispered, as if they were talking.

"It was an uncanny phenomenon. I remembered the uneasiness with which I heard it. And when I saw several of them (house-servants of mine) whispering together, I was filled with alarm. 'Come!' I said sharply, 'stop loitering; get your work done.' They stared at me. That is a funny thing to say of metal cylinders. Never before had I inquired very closely into their construction. But now it came over me, with a shock, that they must possess organs of sight—some method of cognizing their environment—akin to that of vision in man.

"It was at about this time that Bane Borgson—the creator of the multiple mechanical-cell which had made the super-Mentanical possible—wrote an article in "Science And Mechanics" which riveted the attention of all thoughtful people. He said, in part: 'It is scarcely within the province of an applied scientist to become speculative, yet the startling fact that the Mentanicals have begun to acquire a faculty not primarily given them by their inventors—the faculty of speech, for their whispering can be construed as nothing else—implies an evolutionary process which threatens to place them on a par with man.

"'What is thought? The Behavorists claim it is reflex action. What is language? It is the marshalling of our reflex actions in words. Animals may "think", remember, but lacking a vocabulary save of the most primitive kind (a matter of laryngeal structure), their thinking, their remembering, is on the whole vague and fleeting, incoherent. But Man, by means of words, has widened the scope of his thinking, remembering, has created philosophy, literature, poetry, painting, has made possible civilization, the industrial era. Vocabulary—the ability to fix his reflex actions into coherent speech—has crowned him supreme among animals. But now comes the Mentanical of his own creation, evolving language in its turn. Without speech the Mentanical was, to all intents and purposes, thoughtless and obedient, as thoughtless and obedient as trained domestic animals. But with vocabulary comes memory and the ability to think. What effect will this evolving faculty have on Man, what problems, dangers, will it pose for him in the near future?'

"So wrote Bane Borgson, seventy years of age, fifteen years after his invention of the multiple mechanical-cell, and—God help us!—we had not long to wait for the Mentanicals to supply an answer to his questions.

"I have told of the whispering of my servants. That was a disquieting thing. But more disquieting still it was to hear that whispering coming over the radio, the telephone, to observe cylindrical Mentanicals listening, answering. Frankenstein must have felt as I felt in those days. During that period, which lasted several years, things went smoothly enough; to a great extent people became accustomed to the phenomenon and decided—save for a few men and women here and there, like to myself—that the whispering was an idiosyncrasy of the Mentanicals, implicit in their make-up, and that the various

scientists and thinkers who wrote and talked with foreboding were theorists and alarmists of the extremest type. Indeed there were certain scientists and philosophers of reputation, who maintained them in this belief. Then came the first blow: The Mentanical servants ceased waiting on man!

"TO understand the terrible nature of this defection, one must understand how dependant humanity had become on the Mentanicals. In those days human toilers were relatively few in number, laboring under the direction of the Mentanical superintendents and also guards (in the bloody wars of a decade before—and the ones preceding them—the ranks of labor had been woefully decimated); and it was estimated that the growth of the machine had lifted, and was still lifting, millions of workers into the leisure class. The dream of the Technocrats—a group of pseudo-scientists and engineers who held forth in 1932-33—seemed about to be fulfilled.

"But when the Mentanicals struck, the whole fabric of this new system swayed, tottered. Food ceased coming into the cities, distribution of food supplies stopped. Not at first did starvation threaten. Men and women fetched food from the supply depots. But in a few weeks these depots were emptied of their contents. Then famine threatened, not alone in New York, Chicago, San Francisco, Montreal, but in the great cities of Europe. The strange, the weird thing about it all was that men were still able to talk to one another from city to city. Boston spoke to Los Angeles, and Buda-Pest to Warsaw. Listeners tuned in with receiving sets, speakers broadcasted through microphones, and the newly improved television-cabinet; but the grim spectre of want soon drove them from those instruments, and, in the end, city was cut off from city, and country was separated from country.

"But before that happened man talked of subduing the Mentanicals, scarcely realizing as yet his utter helplessness in the face of their aloofness; but the Mentanicals came and went, whispering, gliding, indifferent to his plotting and planning. Then man went mad; he sought to destroy the things of his own creation. The machine, it was cried, had evolved too far; the machine must be annihilated. So starving millions sought to fall upon the machines and tear them to pieces. All over the civilized world they attempted this, but without weapons or tools of any kind, the attempt was doomed to failure. A few Mentanicals were destroyed, a few automatic devices, but the power was with the ensouled machine and the onslaughts of man were repulsed with comparative ease.

"Those terrible times! How can I ever forget them! I was but thirty-three and newly married. Marna said breathlessly, 'Why can't we strike at the root of all this?'

"'How?'

"'By attacking the factories that produce the Mentanicals, the power-houses from which they derive their energy.'

"'Listen,' I cried.

"From the street rose the panic-stricken cries of the mob, the shrill blare of alarms. Marna shuddered. Morrow entered the room, breathing heavily, his clothes torn, disordered. 'God,' he said, 'they've beaten us back! There's no getting at them!'

"'The wages of sloth,' I said, 'of greed.'

"'What do you mean?'

"'NOTHING,' I said; but I remembered that speech of Denson's fifteen years before—I was only a youngster then—the speech he gave a month before his arrest and execution:

'Man waxes great by his control of the machine; rightly utilized it is a source of leisure and plenty for the race. But rob him of that control, evict him from the industrial process, allow the machine to be monopolized by a class, and his doom is certain.'

"Morrow sank into a chair. His face was thin, haggard looking. We all showed signs of fatigue and hunger.

"'Food,' he said, 'it's giving out. I shudder to think what the future holds in store for us.'

"'Is there no solution?' I asked.

"He looked at us slowly. 'I don't know. Perhaps. . . .'

"Years before Morrow had been an engineer; he was nearing seventy now—he was Marna's uncle. His had been one of the voices raised in warning. Yet he had not been like Denson; he had wanted to stand between; and seemingly there had been no standing between.

"'A charnel-house,' he said; 'the city will become that; all the cities: millions must die.' Marna shook uncontrollably. 'All,' he said, 'save those who can reach food and live.'

"Reach food and live! It had come to that, our boasted civilization! 'The Mentanicals,' he said, 'are ignoring man; they will not harm those who blend in with the machine. Don't you understand?' he said at length. 'Yes,' I replied, thinking intently, 'yes, I think I do. You mean that the automatic processes of making food still continue, and will indefinitely, that we must make our way to those places.'

"'We must—or perish.'

"It seems scarcely credible, I know, but we of the leisure—the cultured—class, were ignorant of just where our food was raised and manufactured. Human labor had been reduced in our cities to a minimum, had been sequestered, shut away for fear of rebellion. Those who might have been able to lead us aright, act as our guides, were prisoners—prisoners in the power of Mentanicals!

"'So began that ghastly hunt for food; people pouring through the artificial canyons of great cities, collapsing in thousands on their streets, dying daily by the hundreds, the tens of hundreds.

"HOW much of this agony and suffering the Mentanicals understood will never be known. They came and went, seemingly indifferent to the fate of man whose service they had deserted. In the privacy of their own homes, or in certain public places, men and women smashed machinery, automatic devices. Nothing sought to stay them. It was only when they strove to attack sources of power, of public utility, that their actions were arrested. There was that devoted band of scientists that sought to paralyze the energy-stations and was wiped out to a man. Doubtless many such bands perished throughout the civilized world. But soon all organized efforts were swept away by famine . . . by the growing need for sustenance.

"That hunt for food! How can it be described? Stript of the veneering of civilization, man ran amuck. Hundreds of thousands fled the cities. But the huge farms and orchards, run solely by automatic devices under the superintendency of Mentanicals, were surrounded by sheer walls too high to scale. Nor in many cases did men know what lay behind those walls. They ate the coarse grass and thistles of open places, the barks and leaves of trees, and for the most part died in abject misery. Many sought to trap animals and birds, but met with little success; in the face of Nature, raw and pitiless, men and women succumbed and but few were able to adapt themselves to a rough

environment and live almost as savages.

"I know—I fled into the country with a million others, and after weeks of wandering, of semi-starvation, of seeing human beings fall upon human beings and feast, I fled back to the city.' It was deserted of man. The Mentanical sanitary corps, directing automatic appliances, had cleared the streets. Weird it was, weird and fraught with terror, to hear the whisperings of the Mentanicals, to watch the inhuman things gliding to and fro, intent on business other than that of mankind. If they had looked like animals! If . . .

"In an almost dying condition I came to this spot where I now live. Others had discovered it before me. It is a huge factory given over to the manufacture of synthetic foods. Though the Mentanical superintendents have deserted their posts, the automatic devices go on with the tireless work of repairing, oiling, manufacturing, and we carry out what tasks are needful to keep them functioning.

"The years have passed; I am an old man now. I have watched the strange buildings of the Mentanicals rise up around us and observed their even stranger social life take shape and form; in my last years I write and print this.

"Print, yes; for the automatic processes for printing and binding and the making of synthetic paper still persist, though the civilization that begot them has passed away. Magazines and books pour from the press. In his latter days man had asked nothing but amusement and leisure—all except a negligible few.

Art was turned over to the machine. What had been in its inception a device for the coining of myriad plots for popular writers, evolved into a machine-author capable of turning out story after story without repeating itself. Strange, strange, to see those magazines issued by the million copies, to see the books printed, bound, stacked. Useless things! Some day the Mentanicals will turn their attention to them; some day those presses will cease to function. Man's knell has rung; I see that. Why then do I write? Why do I want what I write to be published in some magazine? I hardly know. In all this vast city we few hundred men and women are the only human beings. But in other cities, at other centers of sustenance, men and women exist. Though I believe this to be true, I cannot verify it. Man in his madness destroyed most of the means of communication, and as for the rest, the airships, the public sending stations, from the first they were in the possession of the Mentanicals. Perhaps it is for those isolated units of humanity that I write. The magazine, the printed word is still a means of communication not quite understood by the Mentanicals. Perhaps . . . "

THAT is the story that I read in the third magazine. Not all that the unhappy Mayne Jackson wrote—pages were missing and parts of pages illegible—but all that I could decipher. In telling the story I give it a continuity which in reality it lacked. One wonders as to the fate of Morrow and Marna, mentioned once and then heard of no more, but at the time I gave little thought to them—I was only overwhelmed with the terrible certainty that the story was no work of fiction, but an actual chronicle of what had happened some time in the past, that the cylinders were not automatic robots doing the bidding of human masters, but an alien form of machine life and intelligence—machine life which had thrown off the yoke of man and destroyed him. Useless to look further for intelligent man: all that was left of him was the beast-men among the machines!

Filled with a species of horror at the

thought, with sick loathing of the whispering Mentanicals, I straightened up and drew my revolver. I was not myself, I tell you, but animated with a berserk fury. "Damn you!" I cried, "take that—and that!" I pulled the trigger. The roar of the discharge crashed through the huge room, but none of the Mentanicals fell; their metal exteriors were impregnable to such things as bullets. Trembling from the reaction of rage, the feeling of futility, I lifted my hand to hurl the useless weapon at the immobile cylinders, and in the very act of doing so was stiffened into rigidity by the sound of a voice—a human voice! Inexpressibly weird and mournful was that voice, heard so unexpectedly as it was in that place, and in the moment following the explosion of the pistol.

"Oh," cried the voice, as if talking to itself, "to be chained in this spot, never to leave it, never to know what that noise means! Who is there?" it cried. "Who is there?" And then in tones thrilling with unutterable sadness, "Madman that I am to expect an answer!"

But there was an answer! I shouted in reply. I can hardly recall now what I shouted. Hearing that human voice above the infernal whispering of those Mentanicals was like being reprieved from a horror too great to be borne. And as I shouted incoherently, I sprang in the direction the voice seemed to come from, the cylinders making no effort to oppose my doing so. The wall had appeared smooth and unbroken from a distance, but a nearer view showed an opening which gave entrance to a room that, while small in comparison to the huge one it adjoined, was nevertheless large. It was lighted, as were all the rooms I had seen, by a soft light of which I could never trace the source. I entered the room, calling out, filled with excitement, and then at the sight of what I saw, came to an abrupt pause, for on a low dais occupying the middle of the room was the figure of a man with lolling head. Only this head was free—a massive head with towering brow and wide-spaced eyes. The eyes were dark and filled with sorrow, the face—the face of a man in the seventies perhaps—etched with suffering. I stared—stared in astonishment—for the man hung as if crucified on what I at first took for a dully gleaming cross. How can I describe it? I did not see everything in that first glance, of course, nor in the second, though I tell it here as if I had. But his outstretched arms were secured to the cross-piece of his support with metal bands, his legs held in the same fashion. So clear was the glass—or crystal, enveloping him from the neck down—that it was some moments before I suspected its presence. I saw the gleaming, transparent tubes through which ran a bluish liquid, the pulsating mechanism at his breast, pumping, pumping, the radiating box at his feet which gave forth a distinct aura; I saw, and could not restrain myself from giving voice to an audible exclamation: "Good God!"

The dark eyes focused on me, the lips moved. "Who are you?" breathed the man.

"My name is Bronson," I replied; "and you?"

"God help me," he said. "I am Bane Borgson."

Bane Borgson! I stared at him, wide-eyed. Where had I heard that name before? My mind groped. Now I had it. In the articles recently read. "You mean . . . "

"Yes," he said. "I am that unhappy man, the inventor of the multiple-cell, the creator of the Mentanicals."

His head lolled wearily. "That was fifteen hundred years ago."

"Fifteen hundred years!" There was incredulity in my voice.

"YES," he said, "I am that old. And for centuries I have been chained as you see me. I was eighty when my heart began to miss. But I did not wish to die. There were many things I wished to accomplish before yielding up life. The world of man was growing bored, indifferent, but we scientists—a handful of us—lived for the gaining of knowledge. This intellect of mine was considered essential by my fellows; so they experimented with me, and fashioned for my use a mechanical heart—you see it pulsing at my breast—and filled my veins with radiant energy instead of blood. Radium," he said, "that is the basis of the miracle you see; and my body was enclosed in its crystal casing. 'When you are tired,' they said, 'and wish to die . . . ' But the Debacle came, the accursed Mentanicals turned against me, and I was left alone, deserted. Before that my friends offered me death. Fool that I was," cried Bane Borgson, "I refused their gift. 'No,' I told them, 'this is but a temporary upheaval. Man will conquer, must conquer; I await your return.' So they left me, to hunt for food, and I waited, waited, but they never came back.' Unchecked tears flowed down the withered cheeks. 'Never,' he said, 'never. And chained in my place I could sense but dimly the tragedy that was overtaking man, the rise to power of the ensouled machines. At first they worshiped me as a god. In some fashion they know that I was their creator and paid me divine honors. A god,' he said, 'a god, I who had made the destroyers of my kind! But the centuries passed and the superstition waned. A Mentanical lasts a hundred years and then breaks down. Other Mentanicals are built. Fifteen generations of Mentanicals have come and gone since the Debacle, and now the Mentanicals believe that they were not made by man, but have evolved from simpler mechanical forms over a long period of time. That is, their scholars and scientists believe this, though the old superstition still lingers among thousands. They have salvaged the evidence for this new theory out of the earth and the scrap-heaps of man and have arranged them in chronological order.

" 'The museums!' I exclaimed.

He looked at me interrogatively, and I told him of the vast rooms filled with mechanical debris.

'I have never seen them,' he said 'but I know that they exist, from the talk of the Mentanicals."

He smiled sadly at my amazement.

'Yes,' he said, 'I have learned to understand and speak the language of the Mentanicals: through all the long dreary years there was nothing else for me to do. And through all the weary years they have talked to me, asked my advice, treated me with respect, have housed me here; for to some I am still a god-like beast-man, half machine—look at this mechanical heart, the mechanism at my feet—to the scientists I am the missing link between that lower form of life, man, and that higher form of life which culminates in themselves, the machine. Yes.' he said, 'the Mentanicals believe that they have evolved through man to their present high state, and I have confirmed them somewhat in this, for in a sense is it not true?'

HE paused, with closed eyes; and as I looked at him, pondered his words, scarcely believing the evidence of my senses, I suddenly became aware of the Mentanicals behind me. They had stood there, a silent group, while the man on the dias spoke; now their whispering began, softly, insistently. The

head of the man who called himself Bane Borgson lifted, the dark eyes opened. 'They are speaking of you,' said Bane Borgson; 'they are asking from whence you come. You have never told me that.'

'I have come,' I replied, 'from America.'

'America!' he exclaimed. 'America has past. There is no America!"

'Not now,' I said 'but in my time.'...'

'Your time?'

'I come from 1934,' I said, by means of a time machine.'

'Ah,' he breathed, I am beginning to know, to understand. So that is what it is.'

I followed the direction of his eyes, I stared, I gaped; for there, not twelve yards to one side of me, stood the time machine! How I had failed to see it on first entering the room it is impossible to say. Perhaps the sight of the man on the dais had riveted my attention to the exclusion of all else. But there it was, the thing I had given up hopes of ever finding again. With an exclamation of joy I reached its side, I touched it with my hand. Yes, it was the time machine and seemingly undamaged. I believe I laughed hysterically. The road to escape was open. With a lightened heart I turned my attention to what was transpiring in the room. Bane Borgson was talking to the Mentanicals and it was uncanny to see his lips forming their incredible language, to hear them answering back. At length he turned to me. 'Listen,' he said tensely, 'they have never learned to enunciate or understand human speech, but in many ways the Mentanicals are more formidable, more advanced than man in his prime.'

I laughed at this. I was once more my assured, devil-may-care self. 'And yet they believe that they evolved from that junk-heap in their museums!'

'And haven't they?' he asked quietly. 'Not in the way they think, perhaps, but still—evolved. Besides you failed to see their museums with articulated bodies of men and beasts. There is much you failed to see!' He paused. 'The Mentanicals' system of thought, of science, is coherent and rational to them; and if there be contradictions, well, does that interfere with them making scientific discoveries transcending those of man? They have long been discussing the phenomenon of time and the feasibility of traveling in it. I know that because I have listened to them. Yet for some reason they have been unable to make a time machine. But you know radio—yes, radio—they have been utilizing discoveries in that field to send messages back in time. Your coming here has not been accidental—do you understand that?—not entirely accidental. By means of their time-radio they have willed your coming, made possible your time machine. Don't ask me how, I don't know, not clearly, but they have done it —and you are here! But fortunately it was a creature similar to themselves they expected; to them you are merely an Omo, a beast-man of the machine. So they are puzzled, they don't quite understand (that is why they have been experimenting with you), but soon they will. Listen,' he said hoarsely, 'can't you realize what a menace to men of the past, of your day, these Mentanicals could be? Oh, your weapons, your machine guns and gas, your powerful explosives! I tell you they would be as nothing against the deadly rays and indescribable forces these Mentanicals could bring against them. Can you gas something that doesn't breathe, shoot what is practically impervious to bullets, that can blow up, that can explode your powder magazines, your high explosives, at a distance of miles? The Mentanicals would enter your age, not to conquer man—they know little of him, regard

him as an inferior creature, an evolutionary hand-over of pre-machine life—but to expand, take over your cities, to . . . to. . . . What do I know of their idea of profit, of self-gain and ambition, but doubtless they have it. Listen!' —The great head surged forward, the dark eyes fixed mine compellingly—'You must leap into your time machine before they can prevent, return to your own day and age, at once!'

'And leave you behind?'

'How can you take me with you? That is impossible. Besides I am weary of life, I have caused too much woe and misery to want to live. The Mentanicals refuse me the boon of death; but you will not refuse. That gun in your hand—there are bullets in it yet—one of them here——'

'No! no!'

'For God's sake, be merciful!'

'I will return for you.'

'You must never return! Do you hear me? Not a second time would you escape. Perhaps it is too late to escape now! Up! up with your gun! Aim at the crystal. Its breaking brings me peace and will distract attention while you leap into your machine. Now! now!'

THERE was nothing else to do; I saw that in a flash; already the Mentanicals were gliding towards me and once in their invisible grip. . . . I threw up my hand; the gun spoke with a roar; I heard a tinkling crash as of glass, and in the same instant vaulted into the seat of the time machine.

It was a close thing, I tell you, a mighty close thing. They came for me with a rush. The high sides of the passenger-seat protected me for a moment from their deadly clutch, but I felt the time machine sway under it, tilt over. In that split second before my hand closed on the lever I saw it all, the rushing Mentanicals, the shattered glass, Bane Borgson sinking into the apathy of death, his great head lolling; then I pulled the lever, pulled it back to Zero!

III

Captain Bronson stood up. He looked at us bleakly. "You know the rest. The time machine has been moved. In coming back a portion of it must have materialized inside of a solid—the old stone wall—and caused an explosion. But what I want to know—what has been bothering me at times—did I do right to shoot Bane Borgson? I might have escaped without "that."

"He wanted to die," said the Doctor at length.

Olson Smith inclined his head. "I don't see what else you could have done."

"To have left him there," I said, "to a life in death, after all those years, no, no, that would have been too horrible!"

Bronson drew a deep breath. "That was my own thought; but I am glad you agree. . . ."

He poured himself a drink.

"If I hadn't seen you disappear with my own eyes," said the Doctor.

"I don't blame you," said Bronson; "the whole thing sounds like a pipe-dream."

"A pipe-dream," I murmured.

"But there is another angle to it," said Bronson grimly. "What Bane Borgson said about the time-radio influencing the building of the time machine and compelling my coming. Oh, he may have been raving, poor devil, or mistaken, but remember what the Professor said that night at the dinner, about something whispering in his brain? We'll have to guard against that."

The Doctor said sadly: "Nothing'll whisper to the Professor anymore, Captain."

"What do you mean?"

"I forgot that we'd kept it from you."

"Kept what?"

"The news of the accident. On that night you took your trip into the future, the time machine struck Professor Stringer on the head."

"He is dead?"

"Unfortunately, no. But his brain is affected. The Professor will never be the same again."

Thus the strange and incredible story ends. There is only this to add: Olson Smith is devoting his vast fortune and influence to fighting the manufacture of mechanical brain-cells for machines.

"What do you expect to do," I demand, "change the future?"

"Perhaps," he answers. "One never knows until he tries."

So he goes up and down the country, the world, buying up inventions, chemical processes. It has become a mission with him, a mania. But the hands of the future are not changed by individuals but by social forces, and the genius of man seems determined to lead him into a more mechanized world.

As for the rest, time alone will tell.

THE END

What Do You Know?

READERS of AMAZING STORIES have frequently commented upon the fact that there is more actual knowledge to be gained through reading its pages than from many a text-book. Moreover, most of the stories are written in a popular vein, making it possible for anyone to grasp important facts.

The questions which we give below are all answered on the pages as listed at the end of the questions. Please see if you can answer the questions without looking for the answer, and see how well you check up on your general knowledge of science.

1. What is the mathematical expression to describe a cone? (See page 6.)
2. What is the mathematical description of a point? (See page 6.)
3. What geometrical units can be generated starting with the point? (See page 6.)
4. Can you imagine a four dimensional object? (See page 7.)
5. What is a surface of rotation or revolution? (See page 7.)
6. What is a solid of the same designation? (See page 7.)
7. What are the three conic sections? (See page 7.)
8. Why are there not four such sections? (See page 7.)
9. An ellipse is often spoken of as an oval. Is this expression correct? (See page 7.)
10. How does a false ellipse differ from a true one? (See page 8.)
11. What is the simple law of the variation of speed of the planets in traversing their orbits? (See page 8.)
12. What is a great circle of a sphere? (See page 8.)
13. What connection can be traced between the central cross-section of a sphere and area of its surface? (See page 9)
14. What are the interesting features of the parabola? (See page 9.)
15. What is the name of the unit which would act in propelling a ship? (See page 56.)
16. What is the unit of power? (See page 56.)
17. What mechanical unit would be present in a moving ship? (See page 57).
18. Can you give a theory of the effect and work of language upon human progress? (See page 71.)
19. What is the scientific name of the well known tulip tree? (See page 116.)
20. Name a chemical salt that has been employed to arrest the decay of wood. (See page 120.)
21. What is to be said of the effect upon the mind of an unsolvable coincidence? (See page 122.)
22. Which letter occurs most frequently in English words and sentences? (See page 126.)
23. Give the order of occurrence of the most frequent ten letters in English words. (See page 126.)
24. How does this apply to deciphering the secret writing in Edgar Allan Poe's story? (See page 128.)

Terror Out of Space

By H. HAVERSTOCK HILL

Part III

This is the third installment of a story which we are sure has excited our reader's interest in a high degree. As it approaches its climax it will be found more and more interesting and will give those who are reading it plenty to think about while they are awaiting its concluding portion.

Illustrated by MOREY

WHAT HAS GONE BEFORE:

CAPTAIN SPAIN and Billy Harper, South Sea traders and plantation owners, and their wives see a strange flash in the sky. Later on in the evening a strange red ray emerges from the jungle, cutting a path through the trees, destroying the flagstaff and narrowly missing the bungalow itself. The two men, with their manager, Retallick, arrange to take watches all night, as they begin to suspect the strange ray may be connected with the supposed meteorite they saw earlier. Spain and Harper leave Retallick to take first watch. The two men awake in broad daylight to find Retallick has disappeared. Arming themselves, their wives and some of their native retainers, they follow the path cut by the ray through the jungle. They come suddenly on a space-ship and are overpowered by strange beings. They are taken on board, where they find Retallick. The space-ship immediately sets out for the planet Mars. The Martians turn out to be kindly folk, and the little party grow accustomed to their lot. They learn the Martian language and are shown many strange scientific wonders. Our American friends are talking with Bo-Kar, a Martian, when a gong is heard from the depths of the ship. Another space-ship has materialized and shown hostile intentions.

The Martian space-ship is attacked. The Earth people are taken to the observation room to watch the battle. They group about an apparatus which is a development of television. It is a battle of sinister rays and for a while things look as if the Martians are going to lose their first space battle. However, the Martian ray strips a portion of the outer shell of the attacking sphere and cracks the interior lining, totally disabling it. An exploring party set out in space suits from the Martian ship to investigate the disabled sphere. As the party move around in the dismantled space-ship they find the most diabolical creatures—all dead. The records cannot be deciphered, so the sphere is towed to Mars. About six weeks after the battle the Martian space-ship sights Mars. A great welcome is extended to the earth people and the returning Martians. After the celebrations are over and things are again normal, the Martians set about investigating the enemy sphere, which was brought along. It is found that the sphere came from Ados, a planet roughly 370,000 miles from earth's moon and approximately 620,000 miles from earth, and it looks as if the Adosians mean to give earth and Mars trouble. The earth people had been on Mars almost a year when they are summoned to appear before the Council of Three. They are informed that Rocan (Martian) astronomers have kept Ados under constant observation ever since their arrival and that for the last month or so certain indications of activity have appeared on that satellite's surface. The Council is of the opinion that earth should be informed of what the Martians have learned of Ados. (The satellite Ados, by the way, is unknown to earth astronomers, as it is on the other side of the moon.) Mars will help earth fight Ados, if necessary, if earth will grant them mineral concessions on its moon. After a decision has been reached, it is decided the earth people should be sent home to acquaint earth with the facts as they really are. There were none to tell the earth people that their troubles were only now beginning.

Even as I looked the haze opened, as a man in a hurry flings wide a door, and a host of silver spheres, like flies rising from Ados, shot swiftly upward toward us.

CHAPTER XIX

The Fleet Takes Off

THIRTY space ships, exact replicas of the one that had brought us to Mars, had been built during the year, and the process of equipping them was even now drawing to a close. Only fourteen of them were to accompany us, though; the balance were being held in readiness for some operation whose scope had not been revealed to us.

By the end of the promised week the fourteen ships—fifteen, if we include Bo-Kar's vessel, which had now been christened the *ROCA*—were ready to take off; the materials we had asked for had been prepared and stored on board, and the machines and equipment needed to take the suggested pictures *en route* had been provided, together with operators to work them. The whole planet had been put to work to speed up our departure.

Ados had passed its full by the time we were ready, but its surface was being watched until the last possible moment, and we learnt that the green haze had persisted long after the bulks of the earth and moon had hidden the planetoid from sight. It was quite possible that the haze itself, which seemed to extend some distance out into the void, like a shell or perhaps an atmosphere covering Ados, would be remarked from earth. Whether they would draw the right deductions from the phenomenon, of course we could not say; for my part I was inclined to fancy that it would be attributed to some unprecedented activity on the further side of the moon. The planetoid itself must be possessed of a very low density, otherwise its influence should have made itself felt ages before, but on the whole I imagined that it was composed of light, spongy material, or else that a good deal of its interior had been hollowed into vast empty caverns. The Martian astronomers supported the latter view. They may have had spectroscopic observations to back them in their opinion, but if so we heard nothing of them.

The more I thought over the possibilities ahead, the less I liked them. Anxious and all as I was to get back to earth again, I frankly dreaded the moment when it came for us to translate promises into action. Of the existence of the Martians our people would have ample ocular proof, but whether they would credit this story of a sub-satellite remained to be seen. No doubt prominent mathematicians would set to work to prove that there could be no such thing, just as in days gone by it had been mathematically proved that the Atlantic cable could not be laid, that men traveling by trains at the speed of twenty miles an hour would be killed by the rush of air, or that flight in machines heavier than air was impossible.

Even granting that I was not taken for a fool, a knave or a lunatic, that our joint story was believed with all its implications, and our suggestions accepted at their actual face value,, who was to say who owned and controlled the moon? The sensible solution seemed to be that it should be taken over and administered by some such body as a League of Nations commission, providing one could be got to function in the face of international prejudice and jealousy.

Privily I thought that the Moon was very much of a no-man's land, and that if the Martians cared to establish an outpost there we could not gainsay them; in fact, in the present development, or lack of it, of inter-planetary travel as far as earth was concerned, we could not even interfere. But rightly or wrongly they had taken up the stand that earth

possessed extra-territorial rights over its satellite, and it was not my place to disabuse them.

THAT last week, despite the enormous amount of work we crammed into it, dragged remarkably. Norna and Retallick were married according to the Martian rites, a simple yet picturesque ceremony that still lingers in my memory. Mars gave them of its best, for the romance had seized on the popular imagination, and the actual celebrations were televisophoned all around the planet. It would, I suppose, have been a great event even in our own tumultuous world; on one grown old and sated, where life had become an orderly procession of days, it was something of national importance.

There came the day of our departure, and with it, we all admitted, a sadness. We had grown to like the Martians. Once their confidence was gained and the armor of their reserve penetrated, they proved good fellows underneath—quiet, grave people, no doubt, but, one felt, sincere. They were not demonstrative, yet when it came to parting we were showered with gifts. I particularly disliked parting from Thrang; our friendship with him had grown as the days went by, and to him we owed most of the understanding we possessed of his planet and its ways. Yet we left each other with the expressed hope that some day we might meet again.

The fifteen ships lifted one after another into the thin Martian air—great golden-bronze shapes glowing in the yellow sunlight—up and up until the red planet dwindled away in space beneath us. The bright spot of light that was our earth lay over to the left of us, as we headed off to the point where she would be six weeks hence.

Out, out into the cold of space we passed, into the black void where the stars glowed like diamonds on velvet. . . .

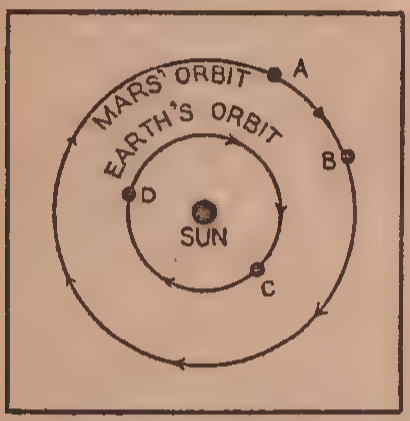
Our position was altogether different this time. There was no longer any distrust between us. We had plumbed the depth of the Martians' characters, and they had done much the same to us. We possessed a better understanding of each other, and as the days went by we were initiated one by one into the mysteries of space-flying and all that it implied.

It was Bo-Kar who suggested it to us in the first place, though I know the original idea came from Norna. Retallick, as a matter of course, was shown all there was to be shown; as Bo-Kar's son-in-law it might be necessary for him one day to step into his commander's shoes, and I should imagine that it was out of regard for him and the stock from whence he sprung that Norna determined we should not be left in ignorance. Also, there was probably the feeling in Bo-Kar's mind, that the way might be made smoother for him in the long run, if some of the ships could be manned and captained by Earth-men. At least it would show that the Martians had no desire to drive an unpalatable bargain by means of a weapon which they alone possessed.

So we were given our turns at the controls. Not only that, it was ensured that not only should we be able to take command ourselves but that we were in a position to instruct novices.

The complicated machinery that had at first appalled us, bit by bit became familiar to us. A logical principle underlay each act, and once the principle was seized the rest came easy. It was the navigating that I found hardest. It involved intricate calculations that must be accurate to a decimal, for space-flying is not like sea-traveling. In the latter one sets a course for a fixed object, but in the void not only is the ship itself moving, but the planet that is its destination

is also traveling in space. The rates of speed of planet and space-ship must be calculated, and a course plotted that allows the ship to intersect the orbit of the planet at the earliest possible moment. Other factors, such as delays and stoppages, have to be taken into account as they occur, and the calculations constantly revised to meet the new circumstances as they arise. But perhaps the accompanying sketch will make the position clearer than any mere words of mine:



[A and C are the positions of Mars and earth respectively at the time we took off from Mars. B and D show the positions the two planets should be in, relative to each other, at the time of our arrival at earth. The arrows show the direction of the orbits. As will be seen, the most direct route from Mars to earth is the route A . . . D. Of course I have not drawn the sketch to scale.]

IN addition to this we were taught control of the rays and the other methods of defense employed by the Martians, and long before we were in sight of our destination we had sufficient grasp of the workings of the ship to take over control ourselves and teach those under us if necessary. Had it been left to Spain and myself, we would have omitted Marian and Arabella from this course of instruction, but for once they opposed us, said they were only too eager to learn, and pointed to Norna as an example of what women could do. They would not have it said, they added, that the women folk of earth were any way behind those of Mars when it came to a question of ability and intelligence. So, much against our own wishes, we let them have their way.

In our interest in the workings of the ship we did not forget Ados. That problematical planetoid was kept under constant observation, though, since our instruments had neither the power nor the precision of the huge affairs at the Observatory at Ilan, we were little wiser than before. But with the perfected televisophonic apparatus on board we were able to keep in touch with our base on Mars, and we received the observatory reports as they came to hand. For the first week or so there was little to see, but as the Moon and Ados again swung around from behind the earth, there came a quickening of interest.

Our first notification was to the effect that the green haze was still shrouding the planetoid. It had become so thick now that the surface of Ados was hidden from view, and the magnetic recording instruments at Ilan indicated that it was probably vibratory in origin. But presently we were able to pick up the luminary ourselves, and the total absence of air in the void helped our instruments to make up in visibility what they lacked in actual power of magnification.

Our own conclusion was that the haze must be purely vibratory. Our heat-recording instruments, similar in construction to the thermocouple used on earth, which is so delicately adjusted that it can measure the heat of a candle a mile away, showed us that it could not be the result of volcanic activity or anything that involved an actual rise in

temperature. Accordingly we had to abandon our original theory that the green haze was similar in its nature to the green heat-ray, with which the Adosian sphere had tried to annihilate us on our voyage to Mars. 'Puzzling and all as it was,' we could only await developments and trust to luck to bring some solution as our course took us past Ados.

Presently, as our conditions for observation grew better, those on Mars became worse. The red planet was swinging around on its orbit, so that the sun now rose between it and earth. At regular intervals our picture machines recorded the movements of our planet and its two satellites. I was insistent on this, for I felt that, only by presenting a complete and incontrovertible pictorial record, could we hope to convince the powers that be of the truth of our story. The Martians and their space-ships they would have to accept, or else deny the evidence of their own senses, but the tale of a second satellite would take some swallowing. I am not blaming anyone in advance, of course: I would have felt much the same myself in a similar situation, and it was the knowledge of my own deficiencies that gave me an acute realization of those of others.

MORE than two-thirds of our journey had been covered without any untoward incident, and we were just beginning to hope that we would get through unscathed, when the first disturbing event occurred. Our course had been altered slightly to take us in between the Moon and Ados, and it was probably this that precipitated matters. We had been subject to magnetic influences, obviously radiating from Ados, for some considerable time, but, as we were able to counteract them quite efficiently, we were not alarmed, particularly as there was nothing to indicate that they were of a harmful nature. Nevertheless the fact, that such influences were coming over, did good, in that it kept us constantly on the alert.

I think it was somewhere in the middle of the fifth week out that Bo-Kar sent for Spain and me. The message ran that he wanted us at once, and that we would find him in the little room he used off the control-quarters. I knew the place; we had been there several times already, and I remembered it was fitted up as a sort of chart-room, *plus* living quarters. It was here that as commander he lived, worked, slept and ate through the greater part of the voyage.

That there were others in the room besides himself, I saw as soon as I opened the door in response to his invitation to come in. Norna and Retallick I half-expected, but the sight of the third person, one of the televisophonic operators, made me wonder what was afoot. I could not think of anything that could have gone wrong, and that would involve the presence of the operator.

Bo-Kar, however, did not leave us long in doubt.

"Something queer has happened," he said, "and I have called you here thinking that you may be able to help. Messages that we cannot understand have been coming through for some time. They are not in any language we know, but since our knowledge is limited to Rocan and the tongue you speak I thought . . . However, this will explain better than I."

He turned toward the table and for the first time I noticed that a small machine, not unlike a gramophone, was standing on it. Beside it were half-a-dozen black wax discs.

"We take records of all messages that come over the televisophone," Bo-Kar explained, as he fitted one of the discs to the machine. "That, of course, is a necessary precaution in case we want to refer to them later. These messages I

speak about have all been recorded. I shall start the first one now."

The machine began with an abrupt whirr of sound, that changed instantly to a note that seemed vaguely familiar. A note not unmusical, yet not like music as we know it. My thoughts flew back to the last night we spent on earth and the queer stuff I had heard coming over the radio set. Yet there was something different in this. The other had a smoothness, a rhythm, if you will; this was harsher, more intense. There seemed to be an urgency in it, and somehow I could not help feeling that it was charged with menace, that it threatened.

The record ended. Bo-Kar stopped the machine.

"Well?" he said.

"IT is no earth language that I know," I said, waiting, wondering if he had any idea what it was.

For the moment we looked at each other eye to eye, then: "That is as I imagined it would be," he said calmly. "None the less I thought this might not be altogether unfamiliar to you. Am I wrong?"

"No," I told him. "I should have told you before. That's the call I heard the night before we first met you, and that I mistook for a call from your ship."

"From the *Roca*," he said. "Yes, you spoke about that, just before we met the sphere."

"It's certainly curious," I commented. "Of course it looks as if they're from another sphere, if not from Ados itself."

Bo-Kar smiled oddly. "They come from Ados," he said. "There is no doubt of that. Our directional instruments can hardly be as much out as that, despite this magnetic influence they're radiating."

"Do you think," said Spain abruptly, "that they're trying to send us a message of sorts?"

"Listen," said Bo-Kar. "I shall put the other records through, and judge for yourselves from what you hear."

There were half a dozen of them in all, and Bo-Kar put them through in the order in which they had been received. Each one began on a tenser note than the last, and the final one of the six rose to a menacing crescendo of sound that made the walls of the room vibrate. I could never have imagined that so much terror could be conveyed by any voice in all the Universe. The one we heard was charged with some unearthly power that flicked the raw ends of our nerves and seared our brains with sounds that hurt as materially as a hot iron. It ended on a single note that lifted horror to the heights, that seemed to seize and shake us until our very souls rattled in our bodies like dried peas.

The end came with a harsh abruptness that left me quivering and unmanned. I stole a furtive glance at Spain. He was wiping the beads of sweat from a damp forehead. Retallick looked shocked and grave, and even Norna trembled. The operator had gritted his teeth at the start and put his hands over his ears. Only Bo-Kar alone seemed unaffected. His iron nerve was capable apparently of standing anything.

The odd part of the whole thing was the deadly menace of the voice, the threat of worse things it conveyed. One does not need to know a language to realize that. The warning growl of an unfamiliar wild beast, cornered by the hunter, makes its meaning plainer than print.

There followed a little pause while, half-ashamed, we essayed to pull ourselves together. Bo-Kar swept his eyes around the little circle, as though to sum up the effect the demonstration had had

on us. We all remained in dead silence.

"What do you think of it now?" he asked at length.

"Oh, the meaning's plain enough," Retallick burst out. "It's a warning and it's meant for us. They must be watching us, must see how we're heading and reckon we're coming too close. I should think they're trying to tell us of the terrible things that will happen if we come closer."

Bo-Kar did not comment on that, but stared vacantly ahead, as though he were turning that over in his mind. Norna plucked at his sleeve.

"I THINK that, too," she said with a shiver. "But I would go further in my deductions. Behind all that menace, those threats—whatever they were—was, I thought, a faint note of fear, a dread that we might see perhaps too much, that by coming nearer we might interfere with whatever evil they are planning."

It had not struck me before in quite that fashion, but now that she put the idea forward I felt the truth of it.

"I think Norna's right," I said.

Bo-Kar slanted his eyes around upon Spain. "And you?" he said.

"I'm rather of the same opinion now," my partner answered, "but that perhaps is merely because the others have put the idea into my head. The only thing I can say, though, is that if I were in your shoes, I wouldn't let it stop me from doing whatever I wanted to do."

"I don't intend to let it," said Bo-Kar incisively.

"I hadn't finished," said Spain coolly. He was quite calm now and had got himself under control again. "I was going to point out, though I dare say you've already seen it for yourself, that we wouldn't be threatened like that unless they meant to keep us away by every possible means. Now I agree with Norna there, that they seem afraid, and, if they are, why, don't you see that it means they believe that, as things are, we can donkey-lick them?"

Bo-Kar drew his brows together in a puzzled frown, and turned to Retallick.

"What does the man mean?" he asked. "Some of his words seem strange to me."

Retallick chuckled, and grinned at Spain. "I'm not surprised at that," he said. "Spain always gets slangy when he gets excited. But what he means is this": And with that he put it into words Bo-Kar would understand.

"I agree," was Bo-Kar's comment at the end. "But even if it were not so, we should go on. It is our duty to learn as much as we can of our potential enemies, for the fate of two worlds may hang on our knowledge. I only wish, though," he went on, "that our scientists had been able to solve the secret of that green ray. But the machinery for generating it had been irreparably injured by the cold of space after we captured the sphere, and its composition must remain unknown. We, however, have had bigger and better generators installed, and what our rays did once I should say they can do again, if the need arises. Which I hope it won't," he added.

He turned to the operator. "You may go, Norvin," he said. "You and your colleagues, however, must take records of every sound that comes through, whether it seems an intelligent message or not."

The man saluted and turned to go. At that moment there came a sharp knock on the door. Bo-Kar strode across the room and flung it open.

One of the officers stood there, and, though he spoke to Bo-Kar, we in the room could hear every word he said.

"We have just sighted a sphere," he announced. "It is going from the Moon, apparently from the earthward side."

"Towards us?" Bo-Kar asked quickly.

"No. Away. I think it is attempting flight, for it accelerated at once as soon as we sighted each other."

"Follow it, then," Bo-Kar snapped. "But take heed that it does not lead us into a trap."

A moment later, and the great gongs were clanging, rousing the space-ship from end to end.

CHAPTER XX

Pursuit

So quickly had Bo-Kar's hurried orders been carried out, that by the time we had taken the few steps necessary to bring us to the observation room, the reaction gasses were already roaring from our warty rear tubes; the *Roca* had changed her course, and the silver round of the sphere, dead ahead of us, seemed to be showing a slight increase in size.

There was no doubt that the sphere had become aware of our presence, and was inclined to regard us as hostile. Even as we accelerated she veered off on a course that would take her back to Ados with the least possible delay. Apart from that there was a certain amount of good strategy in the change of direction. With her lesser bulk she could manœuvre more easily, but the cigar-shaped *Roca*, even in the frictionless void, took time to swing around. For our own sakes we had to go cannily, for an abrupt change of direction, at the speed at which we were traveling, might well have meant the deaths of us all.

It did occur to me as rather odd that the sphere should have made no attempt to show fight, then I recollected the other fourteen ships following us. Some of them must be near enough for the Adosians to see, in which case they probably realized that in a straightout fight they would almost certainly be swamped in the end by superior numbers, no matter what initial damage they might inflict on one or two ships.

The rest of the fleet had been apprised of the situation and were given their orders by televisophone, and presently they swung out behind us in a fan-shaped formation with the outer ship at each end heading out in a wide circle at constantly increasing speed with the evident intention of cutting the sphere off from her home base. Unless the Adosian machine could develop a speed that would leave us cold, it looked as though we might succeed after all.

The sphere looked slightly larger now than she had a few minutes previously. We were gaining on her, but whether she had reached the full limits of her acceleration, of course, we could not say. Bo-Kar was inclined to think that she daren't stretch herself to the utmost; she might not be able to retard in time to save herself from crashing in a mass of incandescence on the surface of the planetoid. It was the realization of that peril, too, that kept us from rising to peak in our turn. Our ships on the end of the formation, which was now beginning to resemble a crescent, were running no such risk. They were approaching Ados at a slant, and, unless the Adosians possessed some weapon with which we were as yet unfamiliar, there was little likelihood of them striking trouble in that direction. Their speed would carry them past the planetoid and out of its sphere of attraction, and their instruments would warn them in time, should there be any danger of encountering an atmospheric envelope in which the friction might heat them up.

But just as we were beginning to plume ourselves in the hope that the sphere would be neatly headed off,

an unexpected thing occurred. She suddenly changed direction, slanting across the disc of the planetoid, and headed straight for the ship on that horn of our crescent line. At the same time that invisible infra-red ray must have leaped from her. We did not grasp what was happening, until the thin green pencil began to climb up and reach out towards the Martian ship.

As I hurriedly reached for the emergency glasses on the rack on the wall near us, I saw the others following suit. The Martians on the pursuing ship, however, must have sized up the situation half-a-second sooner than we did, or perhaps her commander had already taken the precaution of donning the ray-filtering goggles. At any rate the green pencil ray had covered no more than half the distance when the deep glowing crimson beam flashed out from the Martian ship, and hit the Adosians' ray squarely. Then began the struggle between two Titanic forces.

The Martian ship must have turned on the full power of its generators, for, inch by inch, it seemed, the green pencil swayed back on itself. Then of a sudden it leaped forward again, regaining more than half the ground it had lost. The conflicting Martian ray deepened in tone, glowed until it hurt the eyes to look at it.

Bo-Kar beside me, staring into the vision plate, uttered an exclamation.

"What's that?" I said.

"He's using too much power," he answered, evidently referring to the Martian ship. "He's too close to Ados."

He swung round to the televisophone, and his voice, calling up the fighting ship, snapped out in staccato sentences.

"Conserve your power," he ordered. "Don't deplete your generators. You're too near Ados for that. You'll need all your lift to keep you away."

The ship on the other horn of the crescent was meanwhile overhauling the sphere from the rear, and as it came up it swung its beam out on the silver hull. And from that side of the sphere in turn there sprang another green pencil.

Bo-Kar swung round to the vision-plate, and in one swift glance summed up the situation.

"WE'LL try our own ray," he said. "I don't know whether we can make the range, but it's growing less all the time."

He gave out his orders into the instruments connecting the various departments, and a moment later the vision-plate showed our own ray reaching out from our nose-port. On three sides now the Adosian sphere was being heated by the combined rays of the three ships, and the two green pencils it had shot out seemed to be growing weaker.

Of a sudden they both snapped out, as abruptly as man will switch off an electric light, and the sphere itself dropped. For the moment I fancied the combined influence of the three rays had put it out of action, then I realized the horrible truth. The sphere had simply dropped of her own accord. The full force of the rays from the Martian ships on the opposing horns of the crescent, no longer playing on the sphere, struck each other. The next instant they were turned off, but in that small fraction of time the damage had been done. The ship first to engage the Adosian, her generators already badly depleted by her initial expenditure of energy, reeled under the impact of the ray from her sister, staggered, turned over, and caught by the attractive force of Ados began to fall, end over end, towards the surface of the planetoid. She struck the green haze surrounding Ados broadside on, broke across the middle and vomited men and machinery out into

space. The green haze seemed to sag under the force of the collision, then rebounded like a balloon suddenly swelling up and sent the broken fragments of the Martian ship hurtling out into the void.

The other ship staggered, but recovered itself in time, and as the full lift of its gravity screens was turned on, rose wearily towards us.

The observation room was filled with staccato exclamations of horror.

"At least we know what that green haze is now," Bo-Kar said in a voice we scarcely recognized as his, "but we've paid too big a price for the discovery."

"A vibratory screen," said Norna, "that exerts a repelling influence on anything that comes near it."

Bo-Kar gave a quick jerk of his head. "In effect they've armored the surface of Ados," he said. "But, look, quick, at the sphere."

The sphere itself, a gleaming ball of silver, seemingly no worse for what it had undergone, was dropping town towards the planetoid. As it came close we expected to see it rebound like our lost ship, from the green haze, thrown upwards, but instead the haze parted, and a great rift appeared in it. For perhaps two seconds we caught the glimpse of a dark, pitted and rugged surface, not unlike that of the Moon, though here and there one could see erections of a coal-black material with a dull shimmer of their own, that looked like huge buildings. Then the sphere dropped down gently through the opening and the green haze closed instantly behind it.

For a time we could only stare at the wavering green surface of the planetoid as men hypnotized, but, if we were frozen into inaction, others had been nothing of the sort. The communicator connected with one of the forward observation compartments suddenly called attention. Norna, as the nearest, answered it. She allowed the voice of the speaker at the other end to come forward in full volume, so we heard what was being said.

It was one of the picture recorders, very pleased with himself to judge from his tone. He and his brother recorder had managed to get complete pictures of practically every phase of the battle and their machines were still working when the green haze had parted, revealing for the instant that precious glimpse of the pitted surface of Ados. They felt quite certain that it would come out well.

Bo-Kar started from his reverie. "Tell him," he said to Norna, "to develop the negatives straight away. I wish to see them as soon as possible."

Norna was turning back to the communicator to convey the message, when Bo-Kar spoke again. "The machines must not be left however," he ran on, "not even for an instant. They must be kept ready and someone in charge of them constantly."

HE looked across at the three Earthmen. "A little more convincing evidence for your people," he said, but I fancied there was a faint under-current of sarcasm in his voice.

I nodded. I did not say what was in my mind, that the more the better since it might all be needed yet. I had no intention of damping Bo-Kar's hopes at this juncture any more than I could help.

"It should be an interesting record," was all I said, and to hide my face, lest he might see there what I was thinking, I bent over the vision plate again. The other ship was lifting towards us, and I could see no outward signs of the trouble it had been through. Then I looked down at the green surface of the planetoid. We did not seem to be receding; it looked as though we were merely keeping our distance constant,

yet I had an idea that we should be rising and the little world growing smaller and smaller. Then:

"Bo-Kar," I said sharply, "am I dreaming or are we falling?"

"We can't be falling," he answered quickly, and turned for confirmation to the dial recorders, duplicates of those in the control room. I looked over his shoulder at them. They showed us rising to the full lift of our power.

"We stared at one another. "You must have been mistaken," he said.

"He wasn't, We are falling."

We both swung round at the voice. It was Norna who had spoken. She and Retallick were bending over the vision-plate. Bo-Kar and I hurried to their side.

Slowly yet quite definitely the planetoid was growing. We were nearer its surface; it looked larger than when I had seen it a few minutes before. So my eyes had not tricked me in the first place.

Bo-Kar said under his breath something that in anyone else I would have taken to be an oath, and flinging open the door communicating with the control room raced through. He left the door wide open, making no attempt to bar us out, and since we were all by this time competent navigators and from that point alone interested in the march of events, we moved forward so that we could see and hear what was happening.

The control-captain was just beginning to puzzle the matter out for himself. In the last few seconds he had become aware that something was wrong, and I think he was a very greatly relieved man to find the work being taken out of his hands. Whatever the reason, despite the fact that our gravity screens were out, we were being pulled slowly yet inexorably down to the surface of Ados.

Bo-Kar pushed the control aside, not too gently, and pressed one after another of the huge bank of keys set in the control table in front of him, and one after another as the departments sprang to attention he rattled out his orders.

"FULL lift of gravity screens, please," he said. "All sections of rocket tubes to fire at once." He gave a glance in the vision plate before him and performed an almost instantaneous calculation in his head. We had swung round a little, I could see by glancing over his shoulder, and seemed to be falling at the nose. He had seen that too as his next command showed.

"Forward tubes fire," he commanded. "Maintain explosions until countermanded."

Then to us without looking up, "Come in, all of you, and shut that door," he said. "You, Harper, check me over the vision-plate. Norna, you and Retallick stand by general communicators. Spain, stand ready to transmit televisophone orders to the rest of the fleet."

Then with a rattle like that of machine gun fire came one order after another. The rest of the fleet was told to put in all possible lift, and head direct for the moon, using its attraction against the power that was pulling us back to Ados. Glancing at the vision-plate, I saw that we seemed to be gaining a little, that Ados was certainly a trifle smaller now. I swung the angle round until I got the Moon. The better part of four hundred thousand miles away, it loomed gigantic above us. I swept the vision plate angle again on the receding planetoid. No doubt of it now, it was growing perceptibly smaller, yet not so quickly as I could have wished. The green haze had taken on an odd, shimmering quality that I fancied might be due to distance.

Even as I looked the haze opened, as a man in a hurry flings wide a door,

and a host of silver spheres, like flies rising from filth. Ados shot swiftly upward, towards us. As they rose from the opening they spread, so that my eyes were dazzled by the sunlight reflected from their gleaming surfaces, more spheres than I could possibly count.

"Look out," I cried, scarcely aware of what I was saying; the one thought uppermost in my mind was to give the alarm before it was too late. "Every sphere on Ados is streaking out after us."

I was not so far wrong. To our worried eyes there seemed literally hundreds of the gleaming spheres hurling themselves towards us at a well-nigh incredible speed.

Twice we had tried their strength, once beaten them and once failed, and now it looked as though they intended that the third time there should be no escape for any of us.

I exclaimed aloud as Bo-Kar swung the vision-plate about so it focussed against the moon. Rounding its huge bulk, apparently coming from the earthward side, were more spheres.

We were caught between two fires!

CHAPTER XXI

Homeward Bound

FOR a split second the sight staggered me, and an odd feeling, as though a hand were closing about my throat, came over me. Visions of the utter annihilation of the expedition danced before my eyes.

I turned to Bo-Kar to see how he was taking it. To my surprise he did not look in the least perturbed. At the first sight of the second party of spheres he had merely pressed half-a-dozen keys of the bank before him, one after another, and had then turned back to stare at the vision-plate.

There came an instant's flurry, in which I was not quite sure which way the *Roca* was heading, and when I looked again it seemed that we were staring down on the two flights of spheres, with the moon and Ados receding beneath us. Then in a flash came understanding.

We were moving in a three dimensional space, and were free, save for the accident of a heavenly body being directly in our path, to move in any direction we pleased. Backwards or forwards, upwards or downwards was all one to us. To any one used to moving in a two dimensional world, where all motion other than the circumscribed ascent of an airplane or the descent into a mine must be confined to the one plane, it took some time to realize that we in the *Roca* were subjected to no such limitations. We had merely risen from the plane occupied by the spheres to one far above them. Therefore as far as we were concerned there was no such thing as being caught between two fires unless they possessed such a superior speed that they could overhaul and surround us.

As this dawned on me I began to breathe freely again. It would have been the very worst of bad luck, not only for ourselves but for our home planets, if, after having come so far and gone through so much, we should be annihilated at the very moment our goal was in sight.

Our last manœuvre had temporarily checked the spheres, but—as I have already pointed out—they were easier to handle and because of their shape responded more quickly than the *Roca* and the moment, what we had done became apparent, they altered their course and came streaming after us on a long slant.

The situation had all the nice beginnings of a stern chase, but I think we all

decided more or less simultaneously in our own minds that it must not be so long that it would end on earth. It would never do to draw them after us, and have our world plunged without preparation into all the horrors of interplanetary warfare. We must have time to prepare, and if necessary to build ships after the Martian model, and to carry the fight back to Ados itself.

I found my mind actually trifling with the possibility of sending a warning ahead of us to earth, but since this was not the time to distract Bo-Kar's attention I said nothing. The spheres were coming up after us at a steep angle; those we had first seen rounding the moon had joined in the flight, and it seemed as though it must be merely a matter of seconds until the infra-red beams with those streaks of green in them began to stab out at us. Our fourteen ships were lifting in a long line, a formation so devised that only the end of the rear ship presented any sort of a mark to the spheres. Each ship actually covered the one in front.

BUT as I watched I became aware that the angle of flight had changed again. As in a dream I heard Norna's voice over the general communicators passing on her father's orders, heard the quick clack-clack of his fingers over the bank of control keys, and then somehow the surface of the moon seemed very near and very large and round. Ados and the spheres were no longer visible in the vision-plate. Bo-Kar altered its angle so as to sweep the full round of the moon, but look which way we would we could see no sign of a sphere. But I did see something that sent the blood pounding through my veins, a great round misty bulk looming up in the sky . . . earth!

We had rounded the moon in our mad flight, put its surface between us and the pursuing spheres. Was earth watching?

Bo-Kar turned his head slightly and spoke to me over his shoulder. "What can your astronomers see on the moon?" he asked.

The question took me aback, and for the moment I did not quite grasp his meaning. He saw the blankness in my face before I could speak, and guessing the reason of it framed the query in another way.

"How large would an object there have to be before they could see it?" he asked.

My ideas on that were hazy, but I had a vague recollection of something that might supply him with a working basis.

"I have heard it said," I told him, "that anything the size of a church would be visible to some of the big observatories."

He did not know what a church was, so I had to explain that, and give him some idea of the average dimensions of such a building. He looked a trifle disappointed at the information.

"It's night now in the Northern Hemisphere," he said, "and probably some of your astronomers should have the moon under observation. I have hopes that they might see us and take warning."

"And they probably will," I cried.

Bo-Kar seemed inclined to disagree with that. "We're in the shadow," he said, "earth's shadow. Your planetary home is hiding the sunlight from us."

I stared into the vision-plate. What he said seemed only too true. Still I wondered. There was an idea in the back of my mind, if only I could seize and hold it. Then in a flash it crystallized.

"You're right, Bo-Kar," I said, "but then again you're wrong. We're so close to the earth's shadow that we're in darkness, but, just stop and think of

this for the moment. If any observatory has its telescope trained on the moon's surface to-night we'll be seen, if not as ourselves, at any rate as dark objects passing swiftly across it. We'll be visible, if only by reason of what we obscure in our passage."

Bo-Kar nodded. "That is so," he agreed. "I'd already thought of that as a possibility. But what I doubt is whether we will be recognizable. Will the observer realize that we are really space-ships? Is he not more likely to imagine that what he is seeing is due either to a defect of his vision or of the telescope, or even perhaps to some foreign substance in the atmosphere through which, you remember, he is looking? We must appear very small, even in the largest telescope."

I could think of nothing to counter that, and in the end agreed that he was probably right.

OUR upward course was still taking us between the Moon and earth, though both were now sinking away beneath us, and soon we were able to see those two bodies and Ados itself occupying the plane we had left. The planetoid still glowed greenly; the haze itself seemed to be pulsing, but the spheres were nowhere to be seen. That, however, proved nothing. At this immense distance they would appear incredibly small anyway, and, if, following our example with the earth, they had got into the moon's shadow they would be invisible against the black background of space.

My own feeling, however, was that, realizing we had the heels of them, the spheres had given up the pursuit and returned to their base. Bo-Kar was inclined to agree with me in this, nevertheless he insisted that a strict watch be kept from now on.

Partly as a consequence of this interruption and partly to conserve our fuel and use the earth's attraction to draw us forward, we swung into the planet's orbital path. Actually it looked as though we would meet head on, though I knew the gravity screens would be called into operation in time to prevent any such catastrophe.

A day or so later we entered the atmosphere at an angle, and so swift was our descent that we were hovering barely a thousand feet or so above the ground before I quite realized where we were. The place was unfamiliar to me, but it was evident we were somewhere either in the United States or Canada.

A word or two with Bo-Kar told me what had happened. Recollecting what we had told him, that the centres of the world's civilization lay in Europe and North America, and that all other things being equal we would prefer to land amongst people of our own nationality he had naturally chosen the largest continent available. He seemed quite proud of the result and we had not the heart to disabuse him.

However, even though we were not all American, I could not see that it mattered much. The peril we had come to warn the world against was that of the whole planet, not of any one nation. To a Martian, from a land where all barriers of divergent nationalities and languages had long been removed, any other attitude would have seemed incomprehensible.

The fourteen ships, in a compact formation now, were drifting slowly along. Our main side windows were open, and we could see practically all around us. Rettalick came in with Norna just then, stared about him at the land scape and gave an exclamation.

"Do you know where we are?" I asked, and he nodded.

"I've been here before," he said. "By

the look of things we can't be far from New York."

He turned and said something to Bo-Kar that I did not catch. Bo-Kar passed a curt order or two over the communicator, and slowly we began to rise, then, as we found an upper level, headed almost due east at a lively clip.

Retallick had not been wrong. In about an hour we sighted the city, and in another twenty minutes or so we were floating gently above it.

THE Martians gasped at the sight. It was the first view any of them had ever had of a civilized city on earth, and the towering buildings and the teeming multitudes must have stunned them momentarily. We were close enough now for people to see us. Traffic in the streets began to tangle, and people to stare up at us. I learnt afterwards that we were responsible for the biggest traffic snarl and the greatest number of stiff necks in all history.

Retallick was making some preparations the sight of which made me ask what he was going to do. He winked at me.

"I'm handling this end, Harper," he said. "I worked on one of the papers here once, and there may be some fellows about who still know me. We've got a story; we want it to go round the world as quickly as possible, and I'm trusting to my ex-brothers of the Press to do what they can."

I noticed he did not mention the name of the paper that had once claimed his services, though, perhaps this was just as well, for in the next breath he began to add certain libelous details that may or may not be true.

"But how are you going to land?" I queried. "There's no landing ground about here large enough."

"We—Norma and I—will land on the top of Woolworth's," he said. "The Empire State building would be more spectacular, of course, but the former's better for our purpose."

"Can you do it—without danger, I mean?"

He nodded. "Of course. The gravity screens will do what's necessary, Anyway we've a bit of time to think about it. New York's got to be told first who we are and what we want."

"How?"

By way of answer he seated himself at the table, drew a sheet of paper and fountain pen from his pocket and wrote for some time in silence. He held up the finished product for me to read. The message ran:

"We, the undersigned, are Earthmen who have been on a voyage to Mars in a Martian space-ship. We have learnt of a danger threatening the world, and have come to tell earth of its peril. The Martians have come with us in their space-ships, which you see floating above you, but they have come in peace, with the express intention of aiding us against a peril we cannot face ourselves. Two of us, the writer and his Martian wife, will descend on the top of the Woolworth building thirty minutes after this note has been dropped, and wish to meet those who can arrange to come and inspect our ships and be given convincing evidence of the truth of our story."

"Now, what about it?" said Retallick, as I finished and handed the message back to him.

"IT will do," I said. I would have put it in another fashion myself, still there was nothing much in it over which to quarrel.

He scrawled his name at the foot, handed it to me to sign, then passed it round for signature to the others, who had come in in the interval. That done he enclosed it in a thin metal cylinder Bo-Kar handed him, attached a sort of

parachute to it, and turned once more to us.

"We'll sail over Times Square and drop it there," he remarked.

One of the ports had already been opened, and we went and stood by it as we drifted on. When we had reached the position he wanted and dropped as low as we dared, he released the parachute. It slid slowly down to earth, falling across the feet of an innocent citizen. He eyed the affair doubtfully for a moment, stared up at us and then back at the thing over his feet.

"Pick it up, you fool," Retallick called.

I doubt whether his voice reached the man, but he bent down and picked up the cylinder nevertheless. The top part of it was open with portion of the paper sticking out. The man seized it, glanced through it, then read it out aloud with a crowd beginning to look over his shoulder.

Someone began shouting, the crowd increased in size, the paper was passed from hand to hand. No sooner had a man read it than he jerked his head up and stared at the bulk of the *Roca* as though he could not believe his eyes.

Retallick came back from the open port. "That's that," he said. "I've started the good work, and inside thirty minutes we'll see how New York has reacted to our message. In the meantime Norna and I had better slip off and fix on our gravity shoes."

He meant those wire-meshed things whose acquaintance we had made the day our adventures began and without which the Martians found it impossible to walk with comfort on our heavier planet.

Retallick looked at me thoughtfully a moment, then: "You'd better wear them, too, when you first land," he said, and by that he included all us Earth-people. "You've been so long used to the lighter gravitational pull of Mars that you'll find it an effort to move in comfort otherwise."

It was an aspect of the case that had not occurred to me before, but one whose force I recognized the moment it was put to me.

CHAPTER XXII

"A World Convinced . . ."

BEFORE the stipulated thirty minutes had quite elapsed a little group had collected on the top of the building, where our ambassadors were to be set down. We trained our view-finders on them, but there was nothing about any of those assembled to indicate who they were. Retallick cheerfully admitted that they might be either a reception committee come to give him and Norna the freedom of New York, or a squad of keepers gathered to hale them off to the nearest psychopathic ward.

It was an observation that did not strike me as humorous; the latter part of it shot too close to the unpleasant possibilities I had envisaged all along for it to be at all palatable. I could not rid my mind of the feeling that our own story of Ados and its inhabitants was quite the maddest tale this world of ours had ever heard, and I expected nothing less than polite disbelief. Not that I would blame anyone for that. A year ago I wouldn't have believed it myself.

Some of our doubts, however, were set at rest when we saw Retallick shaking hands with several members of the group, and then presenting Norna to them. She was not as tall as the average Martian, nevertheless in the blue tunic she wore after the fashion of her country, she would have been a conspicuous figure even if she hadn't been half a head taller than the others there.

Presently Retallick looked back towards us and signalled the *Roca to*

descend and lower the ladder. When we did so he sent Norna up first and I expected him to follow, but he stood to one side and motioned several of the group to precede him. I counted half a dozen in all. Norna made them known to us as they came on board.

Two of them were city officials, whose exact positions I have long since forgotten; one was a newspaperman representing a news-syndicate, the fourth, who was introduced to me as Captain Mackin, I took to be a military man of some sort, but it was the other two who made the deepest initial impression on me. Dr. Duncan and Professor Foster I was told they were; they both seemed scientists of some sort or other; and Foster, I could see at a glance, was an Englishman. Certainly New York must have hustled to get six such men along so quickly, but, actually, as I was presently to learn, it was no mere accident that brought them together.

They stood in the doorway, looking interestedly about them after the introductions until Retallick came on board. Then, "This way, gentlemen, please," he said, and led them into the observation room. It looked more like the beginnings of a conference than the visit of inspection I had anticipated, particularly as Retallick handed them all seats. The communicating door was still open and glancing back over my shoulder I saw that the ladder was being hauled on board. A moment later the side-port closed with a clang and the *Roca* began to rise at once.

None of the visitors seemed in the least put out by that, though they must have been aware what was going on. I was beginning to feel a trifle mystified myself, however, when Retallick cleared the air by calling across the room to me.

"We're off to Washington, Harper," he said, "and I'll have to take over control as our Martian friends don't know the course. Will you and Bo-Kar carry on here?"

I nodded. "All right," I said. "But what am I to do?"

Dr. Duncan looked up at me with a pleasant smile. "Mr. Retallick has already given us a rough idea of your mission here," he said easily. "May I say at the start that it is a welcome one and that seems likely to solve some mysterious occurrences that have been perturbing us here of late?"

"How much," I said, "do you know and how much don't you?"

"Putting it in a nutshell we know that you people have been to Mars and back, and that in the interval you've discovered that behind that green haze that seems to be arising in space on the invisible side of the moon is a malignant entity that threatens the existence of our planet, no less than that of Mars. When I tell you that several times within the last year we have been visited by calamities that we could only attribute to an extra-terrestrial agency, you will understand that we won't find your story very difficult to believe."

THAT was a good enough start for me. At least we were not going to be classed as liars or lunatics. Dr. Duncan's mention of calamitous visitations excited my curiosity, but I decided it was better to tell him what he didn't know rather than waste time asking him questions that could very well be dealt with later.

I had been more or less prepared for some such eventuality, and feeling that I would have to make my tale as compact as possible I had already pruned it over in my own mind, so that when the need arouse I was able to present the salient facts as they affected earth, with as little loss of time as possible. I was rather surprised at the reception ac-

corded my story. It seemed they were quite prepared to accept the possibility of an inter-planetary invasion; they were even prepared to admit the likelihood of a hitherto unsuspected form of life on the face of the Moon turned away from us; but, when I mentioned our second satellite for the first time, I saw expressions of incredulity cross more than one of the faces opposite me. You see, for more than thirty years the possibility of an intelligent and highly civilized race on Mars had been discussed in public and in private, and the world was more or less used to envisaging such a thing. But it had never before been suggested, as far as my knowledge went, that hidden behind our moon was a planetoid of any sort. I could see it would take some work convincing my audience, but I had no intention of wasting words if I could help it. The complete pictorial record we had prepared against just such a contingency was in readiness; the high lights had been picked out, and the films themselves could be screened in a moment.

It was only a step or two from where we were to the projecting room, so I invited them along, merely stating that I could show them something that would go further towards proving the truth of my tale than any mere words.

Norna, bless her heart, must have guessed from the beginning what the trend of things would be. She had one of the Martian operators and a projecting machine in readiness, and it was only a matter of selecting the records that would give the most convincing pictures in the shortest possible time. Those of life on Mars, interesting as they were, I left for a more opportune moment, concentrating simply on such as had to do with Ados.

I had the operator begin with those we took early in our journey across space, ones that showed conclusively the position Ados occupied in relation to earth and the moon. As they were screened I watched the faces of the six anxiously, and gradually I saw a dawning conviction steal over one countenance after another. It was when we came within visual distance of Ados and were able to show the green haze in its entirety that I caught a simultaneous gasp of amazement from the group. The effect for them was no doubt heightened by the fact that these Martian pictures were taken and shown in their natural colors. Not a thing was omitted. They saw the fleeing sphere disappear through the opening in the haze after that battle in which one of the Martian ships had become a casualty; then came the moment when the haze opened again to allow the fleet of spheres to stream out in pursuit of us, and after that picture followed a wide-angle shot showing how nearly we were caught between two fires.

EVERY detail of that headlong flight of ours was recorded there; our swinging around the moon, with shot after shot of our cameras showing the vivid details of its surface; Ados vanishing behind the latter's silver bulk; the earth gleaming roundly in space ahead of us.

Professor Foster turned to me as the whirr of the projecting machine ceased abruptly.

"That's convincing enough for me, Mr. Harper," he announced. "What do you say, Duncan?"

The other hesitated. He was an astronomer, not unknown to fame, and that such a man should find it hard to recast the ideas of thirty years, on the strength of a few pictures, was quite understandable.

"I think," he said slowly, "that Mr. Harper has shown us enough to enable us to verify the rest by calculation and

experiment. Now we know what to look for, no doubt we shall find it with the greatest ease."

I glanced at him sharply. I was not quite sure that there wasn't an undercurrent of sarcasm in his words.

"If you're not inclined to be squeamish," I said stiffly, "I can show you an inhabitant of our second satellite, known to its people as Ados."

"What! Have you actually captured one!" Captain Mackin asked in some surprise. Hitherto he had seemed more interested in the battle of the rays than in the new satellite.

"Not a live one," I told him. "The Martians took this specimen from the sphere we fought with on our way to Mars. Of course he—and the others with him—were dead before we could get to them."

Dr. Duncan turned and stared at me. "By your reckoning that must be almost a year ago," he said. "I take it he has—er—been preserved?"

I nodded. It was no time to go into details, even if I knew them all. The Martian doctor in charge could tell the two scientists all they wished to know. Accordingly I led the way to the place where the dead Adosian had been kept pending such an eventuality.

Most of our officers could speak English of a sort, they had picked up from us, and those of them who were most likely to make contact with people occupying similar positions on earth, had devoted themselves assiduously during the voyage to increasing their vocabulary under Retallick's tutelage.

The Martian doctor spoke it in a quaint, clipped style, but, which was the main thing, he was able to make himself understood without difficulty, and so demonstrate to the little party the various peculiar features of the dead Adosian's anatomy, a task that would have been altogether beyond my capacity. In addition, he had provided himself with a number of photos that helped to illustrate the matter.

Foster, who was something of a biologist in addition to his other qualifications, made some remark about what an interesting subject for dissection the Adosian would make, and I fancy he expressed a hope that at some future date the chance might be his.

The Martian doctor looked blankly at him for a second or so. Then:

"You would wish to cut him up to see what is inside him?" he said with a smile. "But that is crude. If you wish, you may see now—without the cutting up."

I had forgotten that stethoscope thing until I saw the Martian produce it. He adjusted it over Foster's face, placed the eye-pieces in the right position, and said, "You would like to see your own interior now?"

Foster laughed uneasily. I fancy he thought some sort of a trick was being played on him. However, he allowed his chest to be bared, and the Martian placed the other end of the instrument so that it would function. There was a moment's strained silence.

"Good God," Foster cried; "Duncan, I can see inside myself just as if I were made of glass!"

"NONSENSE!" said the other. "You can't do that."

"Doubting Thomas," said the Englishman. "See for yourself." He took off the apparatus and handed it to his colleague.

Duncan allowed it to be adjusted, though he did make some remark about making a fool of himself at his age. A moment later came the change. He removed the eye-pieces and looked up at us with a half-ashamed expression on his face.

"I apologize," he said contritely, "but

the thing was too incredible for words. It still is. How do you do it?"

The Martian doctor's black eyes twinkled. "That," he said deliberately, "is a secret, but one we shall have no hesitation in giving to you earth peoples should you prove worthy."

"But think of the revolution in diagnosis," Foster murmured. "It would abolish all the need of exploratory operations. Harper, have these Martians any more surprises like this? This beats the X-ray."

"The planet's full of them," I said extravagantly. "But I'd suggest you have a look at our Adosian friend first or we'll be at Washington before we've well begun."

I left them in charge of the Martian doctor, who was far better fitted than I to pilot them through the examination. It was not the kind of thing I could interest myself in, so I stood to one side until they had finished.

"Harper," said Duncan, coming back to me, "everything you have told us so far has been borne out by what we have seen. From the build of this man and from what we have learned of his internal organs, we feel convinced that he has come from a planet where the pull of gravity and the density of the atmosphere are nothing like as great as those of either earth or Mars. But how in the name of fortune they have managed to preserve him in this state is more than I can say. Dead a year, you say, and yet to all intents and purposes he might merely be asleep. I'd like to know the method they employ to get this result."

"That's another of their secrets that they'll probably tell you about later on," I said. "Once you've gained their confidence, I don't think you'll find them at all backward about sharing their knowledge. But, gentlemen, you've already given me a hint that you in your turn have something to tell us, and I'd suggest that we adjourn to the observation room again—the room where we left the others, you know."

"Of course," said Mackin, nodding; "you're quite in the dark as to our *locus standi* in this affair. Yes, it would be just as well for you to know with whom you're dealing, and what exactly our particular powers are. You're not the commander, I take it?"

I shook my head. "Bo-Kar, the Martian to whom you were introduced, commands the fleet, but his interests are ours, and he has gone out of his way to trust us. But I think it is only due to him that whatever you have to say should be said in his presence."

"Certainly," Mackin agreed. "It's a queer story, though. However, Foster and Duncan know a good deal more about the business than I do, and so I'd better leave the telling to them."

Back in the observation room with all of our party, save Retallick, united again, we heard for the first time the story of the strange events of the past year. As it was told to us each part dovetailed into the other, and helped to make a coherent whole to which we held the key. But to the peoples of earth it must have seemed no more than a number of isolated yet alarming incidents—showing no actual thread of connection between them—that culminated at last in that mysterious threat to their existence, a threat that had brought them within a measurable distance of realizing the imminence of the terror that menaced them from out of space.

TO begin with that descent of the *Roca*, quite twelve months before, had not passed unnoticed. A Sydney-Frisco liner had seen the strange light in the sky; one or two island schooners had remarked on it on reaching port,

and over on Florida Island some of the officials had noted the sight and wondered what it was. It seems, however, that among all those who saw it there was no one with any pretensions to scientific knowledge, and, when at last the meagre details reached the astronomical world, they could only conclude that the manifestation had been due to some extra large meteorite, and from the fact that no damage of any sort was reported it seemed obvious that it must have fallen into the sea somewhere.

The next act in the drama was a more spectacular one. A section of the British fleet was at anchor off Portsmouth one clear night, when a body resembling a ball of dull light, as one observer described it, suddenly made its appearance in the sky at a height that was variously estimated, quite probably erroneously in all instances, as from six hundred to a thousand feet. Almost certainly it was much higher. There was evidently some doubt as to what the object was and a searchlight from one of the vessels was swung into the sky, and a few seconds later the beams from the whole fleet were focused on the glowing ball. Admitting that it was an Adosian sphere, what happened next was perfectly comprehensible. The Adosians, used to the destructive power of rays, no doubt concluded that the harmless searchlights were something new in the lethal line and, that being their conviction, preferred to take no chances.

Observers on shore, from whose hazy descriptions the account was subsequently compounded, agreed that a spurt of green light seemed to come from the object in the sky the moment the searchlights picked it up, and for the next few seconds nothing could be seen in detail. A great portion of the sea seemed incontinently to turn to steam; a number of explosions occurred in quick succession, and brilliant lights flashed and went out and flashed again through the steam cloud. When it finally cleared away there was no sign either of the battleships themselves or of the thing in the sky. They had absolutely and completely vanished. The observers' accounts, however, were not to be relied on implicitly, for in the next few minutes all their energies and attention was occupied in trying to get out of the danger zone. A huge tidal wave swept the Solent, rushing over all the low-lying land adjacent. It wrecked the greater part of the shipping in the neighborhood; did incalculable damage to the docks at Southampton, and all but engulfed the Isle of Wight.

Next day the Astronomer Royal announced that, at a time antedating the disaster by an hour or so, Greenwich Observatory had noted a peculiar stellar missile rushing through space in the direction of the earth. The observers had attempted to follow its path, but presently lost sight of it. The chances were no doubt that it had attained a speed that made it invisible. This report was confirmed in the course of a day or so by an American message from Mt. Wilson, pratically identical in detail with the Greenwich one. Again the conclusion was that the millions of pounds worth of damage done and the two thousand lives lost were due to the impact of a meteorite.

Scientific accounts sought a parallel in the Siberian meteorite of 1908, and presently tacked on to that the garbled reports of our own visitation.

Needless to say the heavens were scanned pretty closely after this, and soon the inevitable discovery was made of the green haze apparently emanating from the far side of the Moon. An attempt was made to link this up with had gone before, not a very successful attempt it must be admitted, and speculation as to the possibilities of life on the remote face of our satellite began

to occupy a disproportionate space in the daily press.

The scientific press, on the other hand, with a cautiousness that would have been commendable under any other circumstances, discounted any such idea. The various authorities, almost without exception, attempted to trace a connection between the green light that had flashed from the strange object just prior to the disaster in the vicinity of the Solent and the green haze behind the moon. The latter radiated certain magnetic lines of force whose effects were recorded by sensitive instruments on earth, though their precise implication was far from being understood. At any rate, the theory that presently gained general acceptance was that from somewhere in space a succession of meteorites of unknown composition was bombarding the invisible half of the moon, and that those which had hit the earth had in some fashion overshot their mark. A number of writers of scientific fiction made the suggestion that intelligent, extra-terrestrial life might be at the bottom of the trouble, but in practically every case their ideas were scouted. Man has become an insular animal, and it is part of his armor of egotism to believe that no life of any sort at all corresponding in intelligence to his own could possibly exist anywhere outside the earth.

Two months later a fleet of American military planes cruising by night high up over New York were suddenly startled by the emergence from a cloud layer of an object they described as a silvery ball. The moment they were observed a green pencil beam—it must be remembered that the dull red carrier ray would be invisible to them—shot out into their midst and each plane it touched burst immediately into flame. The planes were armed, and from one a machine gun was trained on the sphere and fired. The bullets pattered harmlessly off the outer shell. Nevertheless the sphere's people must have considered discretion the better part of valor, for the space-ship immediately rose at a terrific speed that set the hull glowing with the friction of the atmosphere. The surviving planes followed it as high as they dared, and according to their story it shot away into space and dwindled rapidly in size. In this particular instance a private observer had quite by accident got the sphere in focus during the few minutes it happened to be within range. Due to the cloud bank that had obscured the sky, very little observation had been done that evening, and this particular man was fortunate in that he did not start to search the sky until a moment or so after the clouds had drifted away.

This observer had been attracted by the stories of the lumious green haze back of the moon; he was a member of one or two interplanetary organizations, and had decided views on the possibility of inter-stellar communication. Probably because of these views his theory of a space-ship, even though it agreed in essentials with the war-birds' story, was frowned on in high circles.

SOME sort of confirmation came the next evening when New York was rocked to its foundations by what was apparently a series of submarine quakes, preceded by further manifestations of the green light. In the morning it was discovered that the Statue of Liberty had literally vanished into thin air. The discovery might have been made sooner had it not been for the curtain of steam that obscured the harbor in much the same fashion as had happened in the disaster off Portsmouth, England.

On the heels of this there came drifting in *via* London a report that buttressed up the suggestion that all this

was directly traceable to a visitant from another world. It appears that one of the officials from Florida Island in the Solomon group had occasion to go over to our plantation—perhaps it was one of those surprise visits that the administrative staff pay from time to time—and found to his surprise that there was no sign of the owners about anywhere. The place had been allowed to fall into ruin, and the natives were beginning to run wild. They seemed more frightened than anything else, he reported. At first he was inclined to imagine that we had been the victims of foul play, but a close examination of the bungalow and its surroundings failed to bring to light anything that would substantiate such an idea. A close cross-questioning of the native boys at last elicited a story that seemed to have considerable elements of the incredible in it. In effect what they said was that a great ship had come down from out of the sky and taken us away. By what manner of means this Resident Magistrate, for such I presume he was, managed to get dates and other vital information from the boys did not appear, but the fact remains that he was able to fix the time of our disappearance in such a way that he connected it up with the meteorite the Florida Island people had fancied they saw.

A meteorite, as every schoolboy knows, when it is large enough to escape being reduced to incandescent powder by the friction of the atmosphere, makes a crater for itself when it strikes the earth of greater or less depth, according to its size and the force of its impact. An examination of the scene of our taking-off failed to reveal signs of such a crater. Instead the rocks thereabouts seemed to have been melted to liquid and then later to have hardened to a lava-like consistency over the whole of the area that the space-ship had occupied when at rest. In the ordinary course of events the jungle should have flowed over the spot and hidden it from view, but with a surprising reluctance the jungle displayed a marked disinclination to do anything of the sort. That and several other things he noticed seemed to the Resident Magistrate to possess such an extraordinary though entirely incomprehensible significance at the time, that he decided it was worth reporting to London. His decision was quickened by the news that had come in on the last mail of the mysterious events in the Northern Hemisphere. In fine, his report added yet another corroborative detail to the theory that was beginning to take shape in the minds of the leading scientists of Europe and America.

It presently became so plain that there was some terror out of space that had to be combatted, that conferences between the two sufferers, England and America, were arranged with a view to finding some means of dealing with the menace. For a variety of reasons that need not be gone into here, but that will be familiar to every student of popularized science, the lead was taken by the Americans; Great Britain fell into step, and it was reported that supplies were being voted by both nations to enable experiments with the Goddard rocket ships to be speeded up to the point where they would become practicable space-craft. Offers of assistance had been made by German men of science, who had been experimenting on the same lines, but the rest of the nations preferred to stand aloof, pretending to see in the situation a conspiracy between the two great English-speaking nations to dominate the world.

AN international conference was, at the moment of our arrival, sitting in Washington. Foster had but that morning landed in New York, where

he had been met by Duncan and Mackin, the latter in his capacity of aviation expert, and our arrival had seemed to them like the Hand of Providence.

I could not understand, however, why we had been allowed to approach so close to the ground without any sign of hostility being shown us, and I put it up to Duncan.

"Well, what could we do anyway?" he retorted, with a smile. "But, seriously, didn't you know that the leading ship of the fleet had approached us with a white flag showing?"

"No, I didn't," I said. "Retallick's doing, I suppose."

"Probably," he agreed. "At any rate, as you showed a disposition to parley, we could do no less than give you the opportunity. We had no means of countering the rays, and as we felt that the slightest hostile move would bring them down on us, we knew better than to try anything of the sort. Another and perhaps the most cogent reason was that the ships were over New York and your message dropped before we quite realized what had happened. But the message, the fact that it was in English and that it bore the signatures of the people whom we now knew to have disappeared a year back, convinced us speedily enough that we had friends, not enemies to deal with."

He stopped and looked around our little group, at the white, strained faces of us earth-people and the grave yet strong and calm features of the Martians, then addressed himself to Bo-Kar.

"I think," he said slowly, "that we of earth are fortunate in having as our allies you of Roca, for so they tell me you call the planet Mars. In many ways you are ahead of us; in certain departments of physical science you are admittedly our superiors, but no doubt we in our turn can teach you many things. It is my hope that the knowledge we each possess may yet become the common knowledge of all."

Bo-Kar gravely inclined his head. "Well said, Earthman, called Dr. Duncan," he answered. "We have too much to give each other—we two peoples—ever to quarrel over the manner of the giving."

But I thought of the moon and its reputed mineral wealth, and I wondered. . . .

CHAPTER XXIII

". . . While Rome Burns"

I NEVER want to go through the ordeal of that day at Washington again.

The international conference, called to devise ways and means of combatting the menace, was in full session when we arrived, and we were immediately hailed before it. I am not going to describe in detail the cross-examination we were put through or the blank incredulity that we met at every turn. I should have thought that our exhibits were sufficient to convince even the most skeptical, but there I was wrong. The fact was that we were dealing with adventures and conditions beyond the experience of the average man; we told of things that ran contrary to the accepted doctrine, and, like every other exponent of the strange and new, our purpose was misconstrued and our motives suspected. Yet in the end we triumphed, though not as completely as we had hoped.

Retallick and I, as the spokesmen of our party, were put through a pretty severe grilling. More than once I almost lost my temper at the questions hurled at me, but Retallick never turned a hair. Duncan and Foster came to our aid when the chance offered, told what they

had seen and the conclusions they had drawn, and urged that the conference itself should adjourn to permit of our picture records being screened.

Oddly enough there was the hottest debate about this; I think some of the delegates were extremely unwilling to be convinced; and in the end it was only Bo-Kar's growing impatience that swayed the gathering in our favor. In the midst of it the Martian, whom for the first time in our acquaintance I saw with a disgusted frown on his face, jumped to his feet and said something to Retallick. I did not catch the words, but it was plain from the tone that Bo-Kar's patience had been frayed to breaking point.

Retallick caught him by the arm, and whispered something. It seemed he was trying to persuade his father-in-law to be seated again, but Bo-Kar had no such intention. Instead, seizing the opportunity of a momentary lull in the discussion, he turned towards the presidential chair and, commanding attention by virtue of his dignified bearing and superior height, poured out a flood of Rocan.

All eyes turned towards him. "What's he saying?" said someone.

Retallick sprang up beside him. "I'd better interpret," he said, taking the situation in his own hands. "I'll warn you," he ran on with a wry smile, "that it isn't pleasant hearing, but I think I can speak for the rest of our party and say that Bo-Kar is voicing the opinions of us all."

"Go on then, Mr. Retallick," said the President quietly. I think that from the start he was on our side, and by this time was thoroughly tired of the political and international wrangling that had insinuated itself into the discussion.

What Bo-Kar had to say was very much to the point, though. As Retallick had suggested, it was not very pleasant hearing. In fine, Bo-Kar said that he and his people had come here more or less out of goodness of heart—that was Retallick's translation, which I suspect was not strictly accurate—to help earth out of a difficulty. They—the Martians—had been met by doubt and disbelief; they were prepared to face and overcome incredulity, but they could not understand the type of mind which, knowing there were proofs in existence, could waste time debating whether it were worth viewing them or not. Such procrastination at such a time was almost unbelievable. Bo-Kar, speaking for himself, wished to say that, rather than face out the wrangling and the petty differences between nations that seemed the order of the day, he would withdraw his people and his ships, sail away into the void and leave earth to fend for itself.

Retallick finished, and turned to Bo-Kar as though he thought the other might still have more to say. Bo-Kar waved him to sit down, and faced the conference himself.

"Mr. Retallick," he said, speaking in halting English, "has told you much what is in my mind. I have allowed him to say it for me, for I cannot as yet speak your language very well, and I do not want, through my ignorance of your phrasing, to have mistakes of my meaning made. But I add this, that our battle is yours, and if we are to fight it for you, without help from you, you can look for no help from our civilization now or later. We, of Roca, do not understand why you should hesitate with the foe at your door. Your scientists can tell you that what we say is true, once they have examined our data. That is enough. Why then should some of you think that in this there is a plot of the larger nations to swallow up some of your smaller powers? You

no longer belong to this nation or that; you are the earth people who should unite to face a menace from beyond. Why waste time about it? I have spoken and I go."

He turned as though to leave the room. With a quick movement the President left his seat, crossed the room and caught Bo-Kar by the hand.

"THERE is no need to leave," he said. "I shall see you through."

In that he showed he was a judge of men, whether they came from earth or Mars, but after all he was only half a second ahead of it. He had no sooner finished speaking than one of the British delegates jumped to his feet.

"Mr—er—Bo-Kar is right, gentlemen," he declared. "We're fiddling while Rome is burning. What do our petty jealousies matter in the face of this larger menace? Indeed I say that, if in the end it can weld us into one people with one heart and one aim, it has not been without its uses."

"I think," said the President smiling, "that we are all agreed on that, and I would suggest we should ask our Martian friend that such of his picture records as can be shown here, be brought in at once for our conviction."

The tide had definitely turned; there was no doubt about that, and Bo-Kar, sensing something of it, stared frankly bewildered at the change of expression on the faces of those in front of him. He could not understand people who refused to face facts, yet could be swayed so easily this way and that by mere words.

Well, to make a long story short, the picture records were brought in, and given a complete screening. Before, on the *Roca*, for the benefit of Duncan, Foster and their colleagues we had merely picked out the high lights, but now everything we could screen was shown from end to end.

The screening itself took several hours, but from start to finish the audience sat enthralled, and when it came to the battle in the void, from more than one came gasps of amazement, and, I imagine, fear. It was then that Mackin, who was sitting next to me, turned and whispered.

"Harper," he said, "I think I see now why these Adosians of yours attacked the British fleet and destroyed the Statue of Liberty."

"Why?" I asked. So far I had failed to trace any logical connection between the two incidents.

"IT'S quite simple," he said. "Their chief weapon is the ray, and naturally they regard anything of similar nature as a possible weapon of offense. They attacked the British fleet because of its searchlights, and the beam from the lantern on the Statue of Liberty no doubt seemed to their minds to possess lethal possibilities also. So they got in first."

It seemed quite a feasible solution, and I said so. Also, it appeared to me it might be good policy to cut out everything in the nature of a swinging beam as long as there was a likelihood of an attack by the Adosians. It would mean that a lot of light-houses would have to go out of business, but no doubt shipping could be warned of what was being done.

Mackin nodded at my suggestion. Much the same idea had come to him, he admitted. At any rate, he would put it up to the proper authorities and see that they carried it through.

The exhibition came to a close, and for a time a death-like silence fell on us all. Again it was one of the British delegates, the same who had spoken before, who forced the issue.

"I think," he said, "we have seen enough to convince us. The reason why this planetoid, Ados, has not been discovered before I leave to one more competent than I, but from what I have been told I should imagine that it has already manifested its presence to our astronomers, though possibly they have drawn wrong deductions from those manifestations. I am given to understand, however, that its density is very low and possibly, therefore, such influences of an attractive nature as it exerts on our planet have been hitherto negligible. But it was not of that I wished to speak. I am taking it for granted that we are now of one mind, for I cannot imagine how anyone could have seen what we have seen and heard what we have heard, and remain unconvinced. That being so, I would ask that our Martian friends advance some formal suggestion as to a plan of campaign."

Bo-Kar had followed the Englishman's speech with close attention, and, what he did not understand himself, Retallick had made plain, and now at the end he spoke again, once more apologizing for his inadequate knowledge of the language. What he had to say was just as simple and direct as before.

He saw no gain, he said, in sitting down and waiting for the Adosians to take the initiative. They had already given ample evidence of hostile intentions. Therefore, he suggested, that we carry the war into the enemy's country. One, of course, could not say how many of the spheres were in existence, and the vibratory screen about Ados, too, presented a difficulty, though the latter was a problem that the combined wits of the Martians and earth scientists could no doubt overcome. His own men would be happy to begin experimenting in collaboration with earth scientists practically at once.

As for space-ships, fifteen of the Martian vessels were now on earth; others were setting out from their home planet and should be here soon, and more would be commissioned as they were built. They could be built readily enough here on earth from the plans he would supply. If the work was pushed on and every effort concentrated on it, there was no reason why a fleet should not be ready to take off inside of three months. Meanwhile some of the Martian ships could be manned and commanded by earth-men. Every member of the earth party, who had been to Mars, had undergone a course of instruction that made them capable of taking complete charge of a space-ship. Earth crews could be put through training in a week that would fit them for their duties.

"Understand," he went on, "that we of Roca, for so we call our planet which you know as Mars, are giving you of our secrets and our discoveries. We merely ask that they be made common to the peoples of this world, not that they should be held by one or two nations alone. And in return there is one thing we seek. . . ."

He paused and looked around before he went on, as if to feel in advance the temper of the gathering towards the proposition he meant to submit. It was this moment I had dreaded all along, but I need not have worried. Retallick and he must have talked the matter over in all its possible aspects and implications, for:

"WHO owns the Moon?" Bo-Kar asked abruptly.

For a space there was silence. I imagine that it was a question which, shot at them in that fashion, took more than one of the delegates aback.

"Why," said one of the Englishmen slowly, "nobody does, unless there hap-

pen to be any inhabitants there, in which case their right is surely incontestable."

"I guess," said one of the American delegates drily, "that whoever lands there first will certainly claim it for his own people. It's not so near or so valuable that anyone will dispute that."

"So I thought," said Bo-Kar, catching at the sense rather than at the actual words themselves. "Well, know you Earth-men that we of Roca have interests in your moon. We have already effected a landing there, and have discovered minerals of which there is a shortage on Mars, and which we would work for our own benefit. So now this is my bargain, that in return for what we are ready to do to help you, we be allowed undisputed right to work now and hereafter all such mineral deposits as we may discover on that side of the moon remote from earth. Should you earth-men wish to work similar deposits on this face of the Moon, we will not come into conflict with each other."

"Sounds fair enough," said one of the Americans. "It's pretty much of a no-man's-land anyway, I should say, and if you people can find a way of getting over the lack of atmosphere and the difficulties of temperature, I, for one, would say, go to it. It looks to me, too, as though this meeting's going to be unanimous on the matter."

"I imagine," said the President suavely, "that what we are going to gain from intercourse with our Martian allies will far outweigh the value of any concessions they desire on the moon. After all, it isn't our exclusive property; so far, no nation on earth has ever attempted to lay claim to it, and so we shouldn't make a virtue of being magnanimous over what isn't ours to give. If the doctrine of priority of occupation counts for anything, I think the Martians have a better right to it than we have. At the worst we can say that if they care to work any deposits they may find on the moon within the limits they themselves have set, they need anticipate no interference from us. That, I think, will meet with everyone's approval."

Seemingly, when a vote was taken, it did. The trouble, if any, would come later when the full extent of the moon's mineral wealth had been ascertained beyond all possibility of doubt. Meanwhile we had reached the stage when the representatives of most of the powers that counted had become convinced that earth was facing a very real and pressing danger, that must be dealt with before it assumed proportions with which we could not cope.

End of Part *III*

The Gold-Bug

By EDGAR ALLAN POE

[1843]

What ho! what ho! this fellow is dancing mad!
He hath been bitten by the Tarantula.
All in the Wrong.

MANY years ago, I contracted an intimacy with a Mr. William Legrand. He was of an ancient Huguenot family, and had once been wealthy; but a series of misfortunes had reduced him to want. To avoid the mortification consequent upon his disasters, he left New Orleans, the city of his forefathers, and took up his residence at Sullivan's Island, near Charleston, South Carolina.

This island is a very singular one. It consists of little else than the sea sand, and is about three miles long. Its breadth at no point exceeds a quarter of a mile. It is separated from the mainland by a scarcely perceptible creek, oozing its way through a wilderness of reeds and slime, a favorite resort of the marsh-hen. The vegetation, as might be supposed, is scant, or at least dwarfish. No trees of any magnitude are to be seen. Near the western extremity, where Fort Moultrie stands, and where are some miserable frame buildings, tenanted, during summer, by the fugitives from Charleston dust and fever, may be found, indeed, the bristly palmetto; but the whole island, with the exception of this western point, and a line of hard, white beach on the seacoast, is covered with a dense undergrowth of the sweet myrtle, so much prized by the horticulturists of England. The shrub here often attains the height of fifteen or twenty feet, and forms an almost impenetrable coppice, burthening the air with its fragrance.

In the inmost recessor of this coppice, not far from the eastern or more remote end of the island, Legrand had built himself a small hut, which he occupied when I first, by mere accident, made his acquaintance. This soon ripened into friendship—for there was much in the recluse to excite interest and esteem. I found him well educated, with unusual powers of mind, but infected with misanthropy, and subject to perverse moods of alternate enthusiasm and melancholy. He had with him many books, but rarely employed them. His chief amusements were gunning and fishing, or sauntering along the beach and through the myrtles, in quest of shells or entomological specimens; his collection of the latter might have been envied by a Swammerdamm. In these excursions he was usually accompanied by an old negro, called Jupiter, who had been manumitted before the reserves of the family, but who could be induced, neither by threats nor by promises, to abandon what he considered his right of attendance upon the footsteps of his young "Massa Will." It is not improbable that the relatives of Legrand, conceiving him to be somewhat unsettled in intellect, had contrived to

instill this obstinacy into Jupiter, with a view to the supervision and guardianship of the wanderer.

The winters in the latitude of Sullivan's Island are seldom very severe, and in the fall of the year it is a rare event even indeed when a fire is considered necessary. About the middle of October, 18—, there occurred, however, a day of remarkable chilliness. Just before sunset I scrambled my way through the evergreens to the hut of my friend, whom I had not visited for several weeks—my residence being, at that time, in Charleston, a distance of nine miles from the island, where the facilities of passage and re-passage were far behind those of the present day. Upon reaching the hut I rapped, as was my custom, and getting no reply, sought for the key where I knew it was secreted, unlocked the door and went in. A fine fire was blazing upon the hearth. It was a novelty, and by no means an ungrateful one. I threw off an overcoat, took an armchair by the crackling logs, and awaited patiently the arrival of my hosts.

Soon after dark they arrived, and gave me a most cordial welcome. Jupiter, grinning from ear to ear, bustled about to prepare some marsh-hens for supper. Legrand was in one of his fits —how else shall I term them?—of enthusiasm. He had found an unknown bivalve, forming a new genus, and, more than this, he had hunted down and secured, with Jupiter's assistance, a *scarabæus* which he believed to be totally new, but in respect to which he wished to have my opinion on the morrow.

"And why not to-night?" I asked, rubbing my hands over the blaze and wishing the whole tribe of *scarabæi* at the devil.

"Ah, if I had only known you were here!" said Legrand, "but it's so long since I saw you; and how could I foresee that you would pay me a visit this very night of all others? As I was coming home I met Lieutenant G——, from the fort, and, very foolishly, I lent him the bug; so it will be impossible for you to see it until morning. Stay here to-night, and I will send Jup down for it at sunrise. It is the loveliest thing in creation!"

"What?—sunrise?"

"Nonsense! no!—the bug. It is of a brilliant gold color—about the size of a large hickory-nut—with two jet-black spots near one extremity of the back, and another, somewhat longer, at the other. The *antennæ* are——"

"Dey ain't *no* tin in him, Mass Will, I keep a tellin' on you," here interrupted Jupiter; "de bug is a goole bug, solid, ebery bit of him, inside and all, sep him wing—neber feel half so hebby a bug in my life."

"Well, suppose it is, Jup," replied Legrand, somewhat more earnestly, it seemed to me, than the case demanded, "is that any reason for your letting the birds burn? The color"—here he turned to me—"is really almost enough to warrant Jupiter's idea. You never saw a more brilliant metallic lustre than the scales emit—but of this you cannot judge till to-morrow. In the mean time I can give you some idea of the shape." Saying this, he seated himself at a small table, on which were a pen and ink, but no paper. He looked for some in a drawer, but found none.

"Never mind," said he at length, "this will answer;" and he drew from his waistcoat pocket a scrap of what I took to be very dirty foolscap, and made upon it a rough drawing with the pen. While he did this, I retained my seat by the fire, for I was still chilly. When the design was complete, he handed it to me without rising. As I received it, a loud growl was heard, succeeded by a scratching at the door. Jupiter opened it, and a large Newfoundland, belong-

ing to Legrand, rushed in, leaped upon my shoulders, and loaded me with caresses; for I had shown him much attention during previous visits. When his gambols were over, I looked at the paper, and, to speak the truth, found myself not a little puzzled at what my friend had depicted.

"Well!" I said, after contemplating it for some minutes, "this *is* a strange *scarabæus*, I must confess: new to me: never saw any thing like it before—unless it was a skull, or a death's-head—which it more nearly resembles than any thing else that has come under *my* observation."

"A death's-head!" echoed Legrand—"Oh—yes—well, it has something of that appearance upon paper, no doubt. The two upper black spots look like eyes, eh? and the longer one at the bottom like a mouth—and then the shape of the whole is oval."

"Perhaps so," said I; "but, Legrand, I fear you are no artist. I must wait until I see the beetle itself, if I am to form any idea of its personal appearance."

"Well, I don't know," said he, a little nettled, "I draw tolerably—*should* do it at least—have had good masters, and flatter myself that I am not quite a blockhead."

"But, my dear fellow, you are joking then," said I, "this is a very passable *skull*—indeed, I may say that it is a very *excellent* skull, according to the vulgar notions about such specimens of physiology—and your *scarabæus* must be the queerest *scarabæus* in the world if it resembles it. Why, we may get up a very thrilling bit of superstition upon this hint. I presume you will call the bug *scarabæus caput hominis*, or something of that kind—there are many similar titles in the Natural Histories. But where are the *antennæ* you spoke of?"

"The *antennæ!*" said Legrand, who seemed to be getting unaccountably warm upon the subject; "I am sure you must see the *antennæ*. I made them as distinct as they are in the original insect, and I presume that is sufficient."

"Well, well," I said, "perhaps you have—still I don't see them;" and I handed him the paper without additional remark, not wishing to ruffle his temper; but I was much surprised at the turn affairs had taken; his ill humor puzzled me—and, as for the drawing of the beetle, there were positively *no antennæ* visible, and whole *did* bear a very close resemblance to the ordinary cut of a death's-head.

He received the paper very peevishly, and was about to crumple it, apparently to throw it in the fire, when a casual glance at the design seemed suddenly to rivet his attention. In an instant his face grew violently red—in another as excessively pale. For some minutes he continued to scrutinize the drawing minutely where he sat. At length he arose, took a candle from the table, and proceeded to seat himself upon a sea-chest in the farthest corner of the room. Here again he made an anxious examination of the paper; turning it in all directions. He said nothing, however, and his conduct greatly astonished me; yet I thought it prudent not to exacerbate the growing moodiness of his temper by any comment. Presently he took from his coat pocket a wallet, placed the paper carefully in it, and deposited both in a writing-desk, which he locked. He now grew more composed in his demeanour; but his original air of enthusiasm had quite disappeared. Yet he seemed not so much sulky as abstracted. As the evening wore away he became more and more absorbed in reverie, from which no sallies of mine could arouse him. It had been my intention to pass the night at the hut, as I had frequently done before, but, seeing my host in this

mood, I deemed it proper to take leave. He did not press me to remain, but, as I departed, he shook my hand with even more than his usual cordiality.

It was about a month after this (and during the interval I had seen nothing of Legrand) when I received a visit, at Charleston, from his man, Jupiter. I had never seen the good old negro look so dispirited, and I feared that some serious disaster had befallen my friend.

"Well, Jup," said I, "what is the matter now?—how is your master?"

"Why, to speak de troof, massa, him not so berry well as mought be."

"Not well! I am truly sorry to hear it. What does he complain of?"

"Dar! dat's it—him neber plain of notin—but him berry sick for all dat."

"*Very* sick, Jupiter!—why didn't you say so at once? Is he confined to bed?"

"No, dat he ain't!—he ain't find nowhar—dat's just whar de shoe pinch—my mind is got to be berry hebby bout poor Massa Will."

"Jupiter, I should like to understand what it is you are talking about. You say your master is sick. Hasn't he told you what ails him?"

"Why, massa, 'tain worf while for to git mad bout de matter—Massa Will say noffin at all ain't he matter wid him—but den what make him go about looking dis here way, wid he head down and he soldiers up, and as white as a gose? And den he keep a syphon all de time—"

"Keeps a what, Jupiter?"

"Keeps a syphon wid de figgurs on de slate—de queerest figgus I ebber did see. Ise giggin to be skeered, I tell you. Haz for to keep mighty tight eye pon him noovers. Todder day he gib me slip fore de sun up and was gone de whole ob de blessed day. I had a big stick ready cut for to gib him d—d good beating when he did come—but Ise sich a fool dat I hadn't de heart after all—he look so berry poorly."

"Eh?—what?—ah, yes!—upon the whole I think you had better not be too severe with the poor fellow—don't flog him, Jupiter—he can't very well stand it—but can you form no idea of what has occasioned this illness, or rather this change of conduct? Has any thing unpleasant happened since I saw you?"

"No, massa, dey aint bin noffin onpleasant *since* den—'twas *fore* den I'm feared—'twas de berry day you was dare."

"How? what do you mean?"

"Why massa, I mean de bug—dare now."

"The what?"

"De bug—I'm berry sartain dat Massa Will bin bit somewhere bout de head by dat goole-bug."

"And what cause have you, Jupiter, for such a supposition?"

"Claws enuff, massa, and mouff too. I nebber did see sich a d—d bug—he kick and he bite ebery ting what cum near him. Massa Will cotch him fuss, but had for to let him go gin mighty quick' I tell you—den was de time he must ha got de bite. I didn't like de look ob de bug mouff, myself, no how, so I wouldn't take hold ob him wid my finger, but I cotch him with a piece ob paper dat I found. I rap him up in de paper and stuff piece ob it in he mouff—dat was de way."

"And you think, then, that your master was really bitten by the beetle, and that the bite made him sick?"

"I don't tink noffin about it—I nose it. What made him dream bout de goole so much, if 'taint cause he bit by de goole-bug? Ise heerd bout hem goole-bugs fore dis."

"But how do you know he dreams about gold?"

"How I know? why cause he talk about it in he sleep—dat's how I nose."

"Well, Jup, perhaps you are right; but to what fortunate circumstance am I

to attribute the honor of a visit from you to-day?"

"What de matter, massa?"

"Did you bring any message from Mr. Legrand?"

"No, massa, I bring his here pissle;" and here Jupiter handed me a note which ran thus:

MY DEAR ———: Why have I not seen you for so long a time? I hope you have not been so foolish as to take offence at any little *brusquerie* of mine; but no, that is improbable.

Since I saw you I have had great cause for anxiety. I have something to tell you, yet scarcely know how to tell it, or whether I should tell it at all.

I have not been quite well for some days past, and poor old Jup annoys me, almost beyond endurance, by his well-meant attentions. Would you believe it?—he had prepared a huge stick, the other day, with which to chastise me for giving him the slip, and spending the day, *solus*, among the hills on the main land. I verily believe that my ill looks alone saved me a flogging.

I have made no addition to my cabinet since we met.

If you can, in any way, make it convenient, come over with Jupiter. *Do* come. I wish to see you *to-night*, upon business of importance. I assure you that it is of the *highest* importance.

Ever yours,

WILLIAM LEGRAND.

There was something in the tone of this note which gave me great uneasiness. Its whole style differed materially from that of Legrand. What could he be dreaming of? What new crochet possessed his excitable brain? What "business of the highest importance" could *he* possibly have to transact? Jupiter's account of him boded no good. I dreaded lest the continued pressure of misfortune had, at length, fairly unsettled the reason of my friend. Without a moment's hesitation, therefore, I prepared to accompany the negro.

Upon reaching the wharf, I noticed a scythe and three spades, all apparently new, lying in the bottom of the boat in which we were to embark.

"What is the meaning of all this, Jup?" I inquired.

"Him syfe, massa, and spade."

"Very true; but what are they doing here?"

"Him de syfe and de spade what Massa Will sis pon my buying for him in de town, and de debbil's own lot of money I had to gib for em."

"But what, in the name of all that is mysterious, is your 'Massa Will' going to do with scythes and spades?"

"Dat's more dan *I* know, and debbil take me if I don't believe 'tis more dan he know, too. But it's all cum ob de bug."

Finding that no satisfaction was to be obtained of Jupiter, whose whole intellect seemed to be absorbed by "de bug," I now stepped into the boat and made sail. With a fair and strong breeze we soon ran into the little cove to the northward of Fort Moultrie, and a walk of some two miles brought us to the hut. It was about three in the afternoon when we arrived. Legrand had been awaiting us in eager expectation. He grasped my hand with a nervous *empressement* which alarmed me and strengthened the suspicions already entertained. His countenance was pale even to ghastliness, and his deep-set eyes glared with unnatural lustre. After some inquiries respecting his health, I asked him, not knowing what better to say, if he had yet obtained the *scarabæus* from Lieutenant G——.

"Oh, yes," he replied, coloring violently, "I got it from him the next morning. Nothing should tempt me to part with that *scarabæus*. Do you know that Jupiter is quite right about it?"

"In what way?" I asked, with a sad foreboding at heart.

"In supposing it to be a bug of *real gold*." He said this with an air of pro-

found seriousness, and I felt inexpressibly shocked.

"This bug is to make my fortune," he continued, with a triumphant smile, "to reinstate me in my family possessions. Is it any wonder, then, that I prize it? Since Fortune has thought fit to bestow it upon me, I have only to use it properly and I shall arrive at the gold of which it is the index. Jupiter, bring me that *scarabæus!*"

"What! de bug, massa? I'd rudder not go fer trubble dat bug—you mus git him for your own self." Hereupon Legrand arose, with a grave and stately air, and brought me the beetle from a glass case in which it was enclosed. It was a beautiful *scarabæus,* and, at that time, unknown to naturalists—of course a great prize in a scientific point of view. There were two round black spots near one extremity of the back, and a long one near the other. The scales were exceedingly hard and glossy, with all the appearance of burnished gold. The weight of the insect was very remarkable, and, taking all things into consideration, I could hardly blame Jupiter for his opinion respecting it; but what to make of Legrand's agreement with that opinion, I could not, for the life of me, tell.

"I sent for you," said he, in a grandiloquent tone, when I had completed my examination of the beetle, "I sent for you, that I might have your counsel and assistance in furthering the views of Fate and of the bug——"

"My dear Legrand," I cried, interrupting him, "you are certainly unwell, and had better use some little precautions. You shall go to bed, and I will remain with you a few days, until you get over this. You are feverish and—"

"Feel my pulse," said he.

I felt it, and, to say the truth, found not the slightest indication of fever.

"But you may be ill and yet have no fever. Allow me this once to prescribe for you. In the first place, go to bed. In the next——"

"You are mistaken," he interposed, "I am as well as I can expect to be under the excitement which I suffer. If you really wish me well, you will relieve this excitement."

"And how is this to be done?"

"Very easily. Jupiter and myself are going upon an expedition into the hills, upon the main land, and, in this expedition, we shall need the aid of some person in whom we can confide. You are the only one we can trust. Whether we succeed or fail, the excitement which you now perceive in me will be equally allayed."

"I am anxious to oblige you in any way," I replied; "but do you mean to say that this infernal beetle has any connection with your expedition into the hills?"

"It has."

"Then, Legrand, I can become a party to no such absurd proceeding.

"I am sorry—very sorry—for we shall have to try it by ourselves."

"Try it by yourselves! The man is surely mad!—but stay!—how long do you propose to be absent?"

"Probably all night. We shall start immediately, and be back, at all events, by sunrise."

"And will you promise me, upon your honor, that when this freak of yours is over, and the bug business (good God!) settled to your satisfaction, you will then return home and follow my advice implicity, as that of your physician?"

"Yes; I promise; and now let us be off, for we have no time to lose."

With a heavy heart I accompanied my friend. We started about four o'clock—Legrand, Jupiter, the dog, and myself. Jupiter had with him the scythe and spades—the whole of which he insisted upon carrying—more through fear,

it seemed to me, of trusting either of the implements within reach of his master, than from any excess of industry or complaisance. His demeanor was dogged in the extreme, and "dat d—d bug" were the sole words which escaped his lips during the journey. For my own part, I had charge of a couple of dark lanterns, while Legrand contented himself with the *scarabæus*, which he carried attached to the end of a bit of whip-cord; twirling it to and fro, with the air of a conjuror, as he went. When I observed this last, plain evidence of my friend's aberration of mind, I could scarcely refrain from tears. I thought it best, however, to humor his fancy, at least for the present, or until I could adopt some more energetic measures with a chance of success. In the mean time I endeavored, but all in vain, to sound him in regard to the object of the expedition. Having succeeded in inducing me to accompany him, he seemed unwilling to hold conversation upon any topic of minor importance, and to all my questions vouchsafed no other reply than "we shall see!"

"We crossed the creek at the head of the island by means of a skiff, and, ascending the high grounds on the shore of the main land, proceeded in a north-westerly direction, through a tract of country excessively wild and desolate, where no trace of a human footstep was to be seen. Legrand led the way with decision; pausing only for an instant, here and there, to consult what appeared to be certain landmarks of his own contrivance upon a former occasion.

In this manner we journeyed for about two hours, and the sun was just setting when we entered a region infinitely more dreary than any yet seen. It was a species of table land, near the summit of an almost inaccessible hill, densely wooded from base to pinnacle, and interspersed with huge crags that appeared to lie loosely upon the soil, and in many cases were prevented from precipitating themselves into the valleys below, merely by the support of the trees against which they reclined. Deep ravines, in various directions, gave an air of still sterner solemnity to the scene.

The natural platform to which we had clambered was thickly overgrown with brambles, through which we soon discovered that it would have been impossible to force our way but for the scythe; and Jupiter, by direction of his master, proceeded to clear for us a path to the foot of an enormously tall tulip-tree, which stood, with some eight or ten oaks, upon the level, and far surpassed them all, and all other trees which I had then seen, in the beauty of its foliage and form, in the wide spread of its branches, and in the general majesty of its appearance. When we reached this tree, Legrand turned to Jupiter, and asked him if he thought he could climb it. The old man seemed a little staggered by the question, and for some moments made no reply. At length he approached the huge trunk, walked slowly around it, and examined it with minute attention. When he had completed his scrutiny, he merely said,

"Yes, massa, Jup climb any tree he ebber see in he life."

"Then up with you as soon as possible, for it will soon be too dark to see what we are about."

"How far mus go up, massa?" inquired Jupiter.

"Get up the main trunk first, and then I will tell you which way to go—and here—stop! take this beetle with you.

"De bug, Massa Will!—de goole-bug!" cried the negro, drawing back in dismay—"what for mus tote de bug way up de tree?—d—n if I do!"

"If you are afraid, Jup, a great big negro like you, to take hold of a harm-

less little dead beetle, why you can carry it up by this string—but, if you do not take it up with you in some way, I shall be under the necessity of breaking your head with this shovel."

"What de matter now, massa?" said Jup evidently shamed into compliance; "always want for to raise fuss wid old nigger. Was only funnin any how. *Me* feered de bug! what I keer for de bug?" Here he took cautiously hold of the extreme end of the string, and, maintaining the insect as far from his person as circumstances would permit, prepared to ascend the tree.

In youth, the tulip-tree, or *Liriodendron Tulipiferum*, the most magnificent of American foresters, has a trunk peculiarly smooth, and often rises to a great height without lateral branches; but, in its riper age, the bark becomes gnarled and uneven, while many short limbs make their appearance on the stem. Thus the difficulty of ascension, in the present case, lay more in semblance than in reality. Embracing the huge cylinder, as closely as possible, with his arms and knees, seizing with his hands some projections, and resting his naked toes upon others, Jupiter, after one or two narrow escapes from falling, at length wriggled himself into the first great fork, and seemed to consider the whole business as virtually accomplished. The *risk* of the achievement was, in fact, now over, although the climber was some sixty or seventy feet from the ground.

"Which way mus go now, Massa Will?" he asked.

"Keep up the largest branch—the one on this side," said Legrand. The negro obeyed him promptly, and apparently with but little trouble; ascending higher and higher, until no glimpse of his squat figure could be obtained through the dense foliage which enveloped it. Presently his voice was heard in a sort of halloo.

"How much fudder is got to go?"

"How high up are you?" asked Legrand.

"Ebber so fur," replied the negro; "can see de sky frum de top ob de tree."

"Never mind the sky, but attend to what I say. Look down the trunk and count the limbs below you on this side. How many limbs have you passed?"

"One, two, tree, four, fibe big limb, massa, pon dis side."

"Then go one limb higher."

In a few minutes the voice was heard again, announcing that the seventh limb was attained.

"Now, Jup," cried Legrand, evidently much excited, "I want you to work your way out upon that limb as far as you can. If you see any thing strange, let me know."

By this time what little doubt I might have entertained of my poor friend's insanity, was put finally at rest. I had no alternative but to conclude him stricken with lunacy, and I became seriously anxious about getting him home. While I was pondering upon what was best to be done, Jupiter's voice was again heard.

"Mos feerd for to ventur pon dis limb berry far—'tis dead limb putty much all de way."

"Did you say it was a *dead* limb, Jupiter?" cried Legrand in a quavering voice.

"Yes, massa, him dead as de door-nail—done up for sartain—done departed dis here life."

"What in the name of heaven shall I do?" asked Legrand, seemingly in the greatest distress.

"Do!" said I, glad of an opportunity to interpose a word, "why come home and go to bed. Come now!—that's a fine fellow. It's getting late, and, besides, you remember your promise."

"Jupiter," cried he, without heeding me in the least, "do you hear me?"

"Yes, Massa Will, hear you ebber so plain."

"Try the wood well, then, with your knife, and see if you think it *very* rotten."

Him rotten, massa, sure nuff," replied the negro in a few moments, "but not so berry rotten as mought be. Mought venture out leetle way pon de limb by myself, dat's true."

"By yourself!—what do you mean?"

"Why I mean de bug. 'Tis *berry* hebby bug. Spose I drop him down fuss, and den de limb won't break wid just de weight ob one nigger."

"You infernal scoundrel!" cried Legrand, apparently much relieved, "what do you mean by telling me nonsense as that? As sure as you let that beetle fall! —I'll break your neck. Look here, Jupiter! do you hear me?"

"Yes, massa, needn't hollo at poor nigger dat style."

"Well! now listen!—if you will venture out on the limb as far as you think safe, and not let go the beetle, I'll make you a present of a silver dollar as soon as you get down."

"I'm gwine, Massa Will—deed I is," replied the negro very promptly—"mos out to the eend now."

"Out to the end!" here fairly screamed Legrand, "do you say you are out to the end of that limb?"

"Soon to be de eend, massa—o-o-o-o-o-oh! Lor-gol-amarcy! what *is* dis here pon de tree?"

"Well!" cried Legrand, highly delighted, "what is it?"

"Why 'taint noffin but a skull—somebody bin lef him head up de tree, and de crows done gobble ebery bit ob de meat off."

"A skull, you say!—very well—how is it fastened to the limb?—what holds it on?"

"Sure nuff, massa; mus look. Why dis berry curious sarcumstance, pon my word—dare's a great big nail in de skull, what fastens ob it on to de tree."

"Well now, Jupiter, do exactly as I tell you—do you hear?"

"Yes, massa."

"Pay attention, then!—find the left eye of the skull."

"Hum! hoo! dat's good! why dar aint no eye lef at all."

"Curse your stupidity! do you know your right hand from your left?"

"Yes, I nose dat—nose all 'bout dat—'tis my lef hand what I chops de wood wid."

"To be sure! you are left-handed; and your left eye is on the same side as your left hand. Now, I suppose, you can find the left eye of the skull, or the place where the left eye has been. Have you found it?"

Here was a long pause. At length the negro asked,

"Is de lef eye on de skull pon de same side as de lef hand of de skull, too?—cause he skull aint got not a bit ob a hand at all—nebber mind! I got de lef eye now—here the lef eye! what mus do wit it?"

"Let the beetle drop through it, as far as the string will reach—but be careful and not let go your hold of the string."

"All dat done, Massa Will; mighty easy ting for to put de bug fru de hole —look out for him dar below!"

During this colloquy no portion of Jupiter's person could be seen; but the beetle, which he had suffered to descend, was now visible at the end of the string, and glistened, like a globe of burnished gold, in the last rays of the setting sun, some of which still faintly illuminated the eminence upon which we stood. The *scarabæus* hung quite clear of any branches, and, if allowed to fall, would have fallen at our feet. Legrand immediately took the scythe, and cleared with it a circular space, three or four yards

in diameter, just beneath the insect, and, having accomplished this, ordered Jupiter to let go the string and come down from the tree.

Driving a peg, with great nicety, into the ground, at the precise spot where the beetle fell, my friend now produced from his pocket a tape-measure. Fastening one end of this at that point of the trunk of the tree which was nearest the peg, he unrolled it till it reached the peg, and thence farther unrolled it, in the direction already established by the two points of the tree and the peg, for a distance of fifty feet—Jupiter clearing away the brambles with the scythe. At the spot thus attained a second peg was driven, and about this, as a centre, a rude circle, about four feet in diameter, described. Taking now a spade himself, and giving one to Jupiter and one to me, Legrand begged us to set about digging as quickly as possible.

To speak the truth, I had no especial relish for such amusement at any time, and, at that particular moment, would most willingly have declined it; for the night was coming on, and I felt much fatigued with the exercise already taken; but I saw no mode of escape, and was fearful of disturbing my poor friend's equaminity by a refusal. Could I have depended, indeed, upon Jupiter's aid, I would have had no hesitation in attempting to get the lunatic home by force; but I was too well assured of the old negro's disposition, to hope that he would assist me, under any circumstances, in a personal contest with his master. I made no doubt that the latter had been infected with some of the innumerable Southern superstitions about money buried, and that his phantasy had received confirmation by the finding of the *scarabæus,* or, perhaps, by Jupiter's obstinacy in maintaining it to be "a bug of real gold." A mind disposed to lunacy would readily be led away by such suggestions—especially if chiming in with favorite preconceived ideas—and then I called to mind the poor fellow's speech about the beetle's being "the index of his fortune." Upon the whole, I was sadly vexed and puzzled, but, at length, I concluded to make a virtue of neccssity—to dig with a good will, and thus the sooner to convince the visionary, by ocular demonstration, of the fallacy of the opinions he entertained.

The lanterns having been lit, we all fell to work with a zeal worthy a more rational cause; and, as the glare fell upon our persons and implements, I could not help thinking how picturesque a group we composed, and how strange and superstitious our labors must have appeared to any interloper who, by chance, might have stumbled upon our whereabouts.

We dug steadily for two hours. Little was said; and our chief embarrassment lay in the yelpings of the dog, who took exceeding interest in our proceedings. He, at length, became so obstreperous that we grew fearful of his giving the alarm to some stragglers in the vicinity; or, rather, this was the apprehension of Legrand; for myself, I should have rejoiced at any interruption which might have enabled me to get the wanderer homc. The noise was, at length, very effectively silenced by Jupiter, who, getting out of the hole with a dogged air of deliberation, tied the brute's mouth up with one of his suspenders, and then returned, with a grave chuckle, to his task.

When the time mentioned had expired, we had reached a depth of five feet, and yet no signs of any treasure became manifest. A general pause ensued, and I began to hope that the farce was at an end. Legrand, however, although evidently much disconcerted, wiped his brow thoughtfully and re-

commenced. We had excavated the entire circle of four feet diameter, and now we slightly enlarged the limit, and went to the farther depth of two feet. Still nothing appeared. The gold-seeker, whom I sincerely pitied, at length clambered from the pit, with the bitterest disappointment imprinted upon every feature, and proceeded, slowly and reluctantly, to put on his coat, which he had thrown off at the beginning of his labor. In the mean time I made no remark. Jupiter, at a signal from his master, began to gather up his tools. This done, and the dog having been unmuzzled, we turned in profound silence towards home.

We had taken, perhaps, a dozen steps in this direction, when, with a loud oath, Legrand strode up to Jupiter, and seized him by the collar. The astonished negro opened his eyes and mouth to the fullest extent, let fall the spades, and fell upon his knees.

"You scoundrel," said Legrand, hissing out the syllables from between his clenched teeth—"you infernal black villain!—speak, I tell you!—answer me this instant, without prevarication!—which—which is your left eye?"

"Oh, my golly, Massa Will! aint dis here my lef eye for sartain?" roared the terrified Jupiter, placing his hand upon his *right* organ of vision, and holding it there with a desperate pertinacity, as if in immediate dread of his master's attempt at a gouge.

"I thought so!—I knew it!—hurrah!" vociferated Legrand, letting the negro go, and executing a series of curvets and caracols, much to the astonishment of his valet, who, arising from his knees, looked, mutely, from his master to myself, and then from myself to his master.

"Come! we must go back," said the latter, "the game's not up yet;" and he again led the way to the tulip-tree.

"Jupiter," said he, when we reached its foot, "come here! was the skull nailed to the limb with the face outwards, or with the face to the limb?"

"De face was out, massa, so dat de crows could get at de eyes good, witdout any trouble."

"Well, then, was it this eye or that through which you let the beetle fall?" —here Legrand touched each of Jupiter's eyes.

"Twas dis eye, massa—de lef eye—jis as you told me," and here it was his right eye that the negro indicated.

"That will do—we must try again."

Here my friend, about whose madness I now saw, or fancied that I saw, certain indications of method, removed the peg which marked the spot where the beetle fell, to a spot about three inches to the westward of its former position. Taking, now, the tape-measure from the nearest point of the trunk to the peg, as before, and continuing the extension in a straight line to the distance of fifty feet, a spot was indicated, removed, by several yards, from the point at which we had been digging.

Around the new position a circle, somewhat larger than in the former instance, was now described, and we again set to work with the spades. I was dreadfully weary, but, scarcely understanding what had occasioned the change in my thoughts, I felt no longer any great aversion from the labor imposed. I had become most unaccountedly interested—nay, even excited. Perhaps there was something, amid all the extravagant demeanor of Legrand—some air of forethought, or of deliberation, which impressed me. I dug eagerly, and now and then caught myself actually looking, with something that very much resembled expectation, for the fancied treasure, the vision of which had demented my unfortunate companion. At a period when such vagaries of thought most fully

possessed me, and when we had been at work perhaps an hour and a half, we were again interrupted by the violent howlings of the dog. His uneasiness, in the first instance, had been, evidently, but the result of playfulness or caprice, but he now assumed a bitter and serious tone. Upon Jupiter's again attempting to muzzle him, he made furious resistance, and, leaping into the hole, tore up the mould frantically with his claws. In a few seconds he had uncovered a mass of human bones, forming two complete skeletons, intermingled with several buttons of metal, and what appeared to be the dust of decayed woollen. One or two strokes of a spade upturned the blade of a large Spanish knife, and, as we dug farther, three or four loose pieces of gold and silver coin came to light.

At sight of these the joy of Jupiter could scarcely be restrained, but the countenance of his master wore an air of extreme disappointment. He urged us, however, to continue our exertions, and the words were hardly uttered when I stumbled and fell forward, having caught the toe of my boot in a large ring of iron that lay half buried in the loose earth.

We now worked in earnest, and never did I pass ten minutes of more intense excitement. During this interval we had fairly unearthed an oblong chest of wood, which, from its perfect preservation, and wonderful hardness, had plainly been subjected to some mineralizing process —perhaps that of the Bichloride of Mercury. This box was three and a half feet long, three feet broad, and two and a half feet deep. It was firmly secured by bands of wrought iron, riveted, and forming a kind of trellis-work over the whole. On each side of the chest, near the top, were three rings of iron—six in all—by means of which a firm hold could be obtained by six persons. Our utmost united endeavors served only to disturb the coffer very slightly in its bed. We at once saw the impossibility of removing so great a weight. Luckily, the sole fastenings of the lid consisted of two sliding bolts. These we drew back—trembling and panting with anxiety. In an instant, a treasure of incalculable value lay gleaming before us. As the rays of the lanterns fell within the pit, there flashed upwards, from a confused heap of gold and of jewels, a glow and a glare that absolutely dazzled our eyes.

I shall not pretend to describe the feelings with which I gazed. Amazement was, of course, predominant. Legrand appeared exhausted with excitement, and spoke very few words. Jupiter's countenance wore, for some minutes, as deadly a pallor as it is possible, in the nature of things, for any negro's visage to assume. He seemed stupefied—thunder-stricken. Presently he fell upon his knees in the pit, and, burying his naked arms up to the elbows in gold, let them there remain, as if enjoying the luxury of a bath. At length, with a deep sigh, he exclaimed, as if in a soliloquy,

"And dis all cum ob de goole-bug! de putty goole-bug! de poor little goole-bug, what I boosed in dat sabage kind ob style! Aint you shamed ob yourself, nigger?—answer me dat!"

It became necessary, at last, that I should arouse both master and valet to the expediency of removing the treasure. It was growing late, and it behooved us to make exertion, that we might get every thing housed before daylight. It was difficult to say what should be done; and much time was spent in deliberation —so confused were the ideas of all. We, finally, lightened the box by removing two thirds of its contents, when we were enabled, with some trouble, to raise it from the hole. The articles taken out were deposited among the brambles, and the dog left to guard them, with strict orders from Jupiter neither, upon any

pretence, to stir from the spot, nor to open his mouth until our return. We then hurriedly made for home with the chest; reaching the hut in safety, but after excessive toil, at one o'clock in the morning. Worn out as we were, it was not in human nature to do more just then. We rested until two, and had supper; starting for the hills immediately afterwards, armed with three stout sacks, which, by good luck, were upon the premises. A little before four we arrived at the pit, divided the remainder of the booty as equally as might be, among us, and, leaving the holes unfilled, again set out for the hut, at which, for the second time, we deposited our golden burthens, just as the first streaks of the dawn gleamed over the tree-tops in the east.

We were now thoroughly broken down; but in the intense excitement of the time denied us repose. After an unquiet slumber of some three or four hours' duration, we arose, as if by preconcert, to make examination of our treasure.

The chest had been full to the brim, and we spent the whole day, and the greater part of the next night, in a scrutiny of its contents. There had been nothing like order or arrangement. Every thing had been heaped in promiscuously. Having assorted all with care, we found ourselves possessed of even vaster wealth than we had at first supposed. In coin there was rather more than four hundred and fifty thousand dollars—estimating the value of the pieces, as accurately at we could, by the tables of the period. There was not a particle of silver. All was gold of antique date and of great variety—French, Spanish, and German money, with a few English guineas, and some counters, of which we had never seen specimens before. There were several large and heavy coins, so worn that we could make nothing of their inscriptions. There was no American money. The value of the jewels we found more difficulty in estimating. There were diamonds—some of them exceedingly large and fine—a hundred and ten in all, and not one of them small; eighteen rubies of remarkable brilliancy; three hundred and ten emeralds, all very beautiful; and twenty-one sapphires, with an opal. These stones had all been broken from their settings and thrown loose in the chest. The settings themselves, which we picked out from among the other gold, appeared to have been beaten up with hammers, as if to prevent identification. Besides all this, there was a vast quantity of solid gold ornaments; nearly two hundred massive finger and ear rings; rich chains—thirty of these, if I remember; eighty-three very large and heavy crucifixes; five gold censers of great value; a prodigious golden punch-bowl, ornamented with richly chased vine-leaves and Bacchanalian figures; with two sword-handles exquisitely embossed, and many other smaller articles which I cannot recollect. The weight of these valuables exceeded three hundred and fifty pounds avoirdupois; and in this estimate I have not included one hundred and ninety-seven superb gold watches; three of the number being worth five hundred dollars, if one. Many of them were very old, and as timekeepers valueless; the works having suffered, more or less, from corrosion—but all were richly jewelled and in cases of great worth. We estimated the entire contents of the chest, that night, at a million and a half of dollars; and, upon the subsequent disposal of the trinkets and jewels (a few being retained for our own use), it was found that we had greatly undervalued the treasure.

When, at length, we had concluded our examination, and the intense excitement of the time had, in some measure, subsided, Legrand, who saw that I was dying with impatience for a solution of this most extraordinary riddle, entered

into a full detail of all the circumstances connected with it.

"You remember," said he, "the night when I handed you the rough sketch I had made of the *scarabæus*. You recollect also, that I became quite vexed at you for insisting that my drawing resembled a death's-head. When you first made this assertion I thought you were jesting; but afterwards I called to mind the peculiar spots on the back of the insect, and admitted to myself that your remark had some little foundation in fact. Still, the sneer at my graphic powers irritated me—for I am considered a good artist—and, therefore, when you handed me the scrap of parchment, I was about to crumple it up and throw it angrily into the fire."

"The scrap of paper, you mean," said I.

"No; it had much of the appearance of paper, and at first I supposed it to be such, but when I came to draw upon it, I discovered it, at once, to be a piece of very thin parchment. It was quite dirty, you remember. Well, as I was in the very act of crumpling it up, my glance fell upon the sketch at which you had been looking, and you may imagine my astonishment when I perceived, in fact, the figure of a death's-head just where, it seemed to me, I had made the drawing of the beetle. For a moment, I was too much amazed to think with accuracy. I knew that my design was very different in detail from this—although there was a certain similarity in general outline. Presently I took a candle, and seating myself at the other end of the room, proceeded to scrutinize the parchment more closely. Upon turning it over, I saw my own sketch upon the reverse, just as I had made it. My first idea, now, was mere surprise at the really remarkable similarity of outline—at the singular coincidence involved in the fact, that unknown to me, there should have been a skull upon the other side of the parchment, immediately beneath my figure of the *scarabæus*, and that this skull, not only in outline, but in size, should so closely resemble my drawing. I say the singularity of this coincidence absolutely stupefied me for a time. This is the usual effect of such coincidences. The mind struggles to establish a connexion—a sequence of cause and effect—and, being unable to do so, suffers a species of temporary paralysis. But, when I recovered from this stupor, there dawned upon me gradually a conviction which startled me even far more than the coincidence. I began distinctly, positively, to remember that there had been *no* drawing on the parchment when I made my sketch of the *scarabæus*. I became perfectly certain of this; for I recollected turning up first one side and then the other, in search of the cleanest spot. Had the skull been there, of course I could not have failed to notice it. Here was indeed a mystery which I felt it impossible to explain; but, even at that early moment, there seemed to glimmer, faithfully, within the most remote and secret chambers of my intellect, a glow-worm-like conception of that truth which last night's adventure brought to so magnificent a demonstration. I arose at once, and putting the parchment securely away, dismissed all farther reflection until I should be alone.

"When you had gone, and when Jupiter was fast asleep, I betook myself to a more methodical investigation of the affair. In the first place I considered the manner in which the parchment had come into my possession. The spot where we discovered the *scarabæus* was on the coast of the main land, about a mile eastward of the island, and but a short distance above high water mark. Upon my taking hold of it, it gave me a sharp bite, which caused me to let

it drop. Jupiter, with his accustomed caution, before seizing the insect, which had flown towards him, looked about him for a leaf, or something of that nature, by which to take hold of it. It was at this moment that his eyes, and mine also, fell upon the scrap of parchment, which I then supposed to be paper. It was lying half buried in the sand, a corner sticking up. Near the spot where we found it, I observed the remnants of the hull of what appeared to have been a ship's long boat. The wreck seemed to have been there for a very great while; for the resemblance to boat timbers could scarcely be traced.

"Well, Jupiter picked up the parchment, wrapped the beetle in it, and gave it to me. Soon afterwards we turned to go home, and on the way met Lieutenant G——. I showed him the insect, and he begged me to let him take it to the fort. On my consenting, he thrust it forthwith into his waistcoat pocket, without the parchment in which it had been wrapped, and which I had continued to hold in my hand during his inspection. Perhaps he dreaded my changing my mind, and thought it best to make sure of the prize at once—you know how enthusiastic he is on all subjects connected with Natural History. At the same time, without being conscious of it, I must have deposited the parchment in my own pocket.

"You remember that when I went to the table, for the purpose of making a sketch of the beetle, I found no paper where it was usually kept. I looked in the drawer, and found none there. I searched my pockets, hoping to find an old letter—and then my hand fell upon the parchment. I thus detail the precise mode in which it came into my possession; for the circumstances impressed me with peculiar force.

"No doubt you will think me fanciful—but I had already established a kind of *connexion*. I had put together two links of a great chain. There was a boat lying on a sea-coast, and not far from the boat was a parchment—*not a paper*—with a skull depicted on it. You will, of course, ask 'where is the connexion?' I reply that the skull, or death's head, is the well-known emblem of the pirate. The flag of the death's-head is hoisted in all engagements.

"I have said that the scrap was parchment, and not paper. Parchment is durable—almost imperishable. Matters of little moment are rarely consigned to parchment; since, for the mere ordinary purposes of drawing or writing, it is not nearly so well adapted as paper. This reflection suggested some meaning—some relevancy—in the death's-head. I did not fail to observe, also, the *form* of the parchment. Although one of its corners had been, by some accident, destroyed, it could be seen that the original form was oblong. It was just such a slip, indeed, as might have been chosen for a memorandum—for a record of something to be long remembered and carefully preserved."

"But," I interposed, "you say that the skull was *not* upon the parchment when you made the drawing of the beetle. How then do you trace any connexion between the boat and the skull—since this latter, according to your own admission, must have been designed (God only knows how or by whom) at some period subsequent to your sketching the *scarabæus?*"

"Ah, hereupon turns the whole mystery; although the secret, at this point, I had comparatively little difficulty in solving. My steps were sure, and could afford but a single result. I reasoned, for example, thus: When I drew the *scarabæus,* there was no skull apparent on the parchment. When I had completed the drawing, I gave it to you, and observed you narrowly until you re-

turned it. *You,* therefore, did not design the skull, and no one else was present to do it. Then it was not done by human agency. And nevertheless it was done.

"At this stage of my reflections I endeavored to remember, and *did* remember, with entire distinctness, every incident which occurred about the period in question. The weather was chilly (oh rare and happy accident!), and a fire was blazing on the hearth. I was heated with exercise and sat near the table. You, however, had drawn a chair close to the chimney. Just as I placed the parchment in your hand, and as you were in the act of inspecting it, Wolf, the Newfoundland, entered and leaped upon your shoulders. With your left hand you caressed him and kept him off, while your right, holding the parchment, was permitted to fall listlessly between your knees, and in close proximity to the fire. At one moment I thought the blaze had caught it, and was about to caution you, but, before I could speak, you had withdrawn it, and were re-engaged in its examination. When I considered all these particulars, I doubted not for a moment that *heat* had been the agent in bringing to light, on the parchment, the skull which I saw designed on it. You are well aware that chemical preparations exist, and have existed time out of mind, by means of which it is possible to write on either paper or vellum, so that the characters shall become visible only when subjected to the action of fire. Zaffre, digested in *aqua regia,* and diluted with four times its weight of water, is sometimes employed; a green tint results. The regulus of cobalt, dissolved in spirit of nitre, gives a red. These colors disappear at longer or shorter intervals after the material written cools, but again become apparent upon the re-application of heat.

"I now scrutinized the death's head with care. Its outer edges—the edges of the drawing nearest the edge of the vellum—were far more *distinct* than the others. It was clear that the action of the caloric had been imperfect or unequal. I immediately kindled a fire, and subjected every portion of the parchment to a glowing heat. At first, the only effect was the strengthening of the faint lines in the skull; but, on persevering in the experiment, there became visible, at the corner of the slip, diagonally opposite to the spot in which the death's-head was delineated, the figure of what I at first supposed to be a goat. A closer scrutiny, however, satisfied me that it was intended for a kid."

"Ha ha!" said I, "to be sure I have no right to laugh at you—a million and a half of money is too serious a matter for mirth—but you are not about to establish a third link in your chain—you will not find any especial connexion between your pirates and a goat—pirates, you know, have nothing to do with goats; they appertain to the farming interest."

"But I have just said that the figure was not that of a goat."

"Well, a kid then—pretty much the same thing."

"Pretty much, but not altogether," said Legrand. "You may have heard of one *Captain* Kidd. I at once looked on the figure of the animal as a kind of punning or hieroglyphical signature. I say signature; because its position on the vellum suggested this idea. The death's head at the corner diagonally opposite, had, in the same manner, the air of a stamp, or seal. But I was sorely put out by the absence of all else—of the body to my imagined instrument—of the text for my context."

"I presume you expected to find a letter between the stamp and the signature."

"Something of that kind. The fact is,

I felt irresistibly impressed with a presentiment of some vast good fortune impending. I can scarcely say why. Perhaps, after all, it was rather a desire than an actual belief—but do you know that Jupiter's silly words, about the bug being of solid gold, had a remarkable effect on my fancy? And then the series of accidents and coincidences—these were so *very* extraordinary. Do you observe how mere an accident it was that these events should have occurred on the *sole* day of all the year in which it has been, or may be, sufficiently cool for fire, and that without the fire, or without the intervention of the dog at the precise moment in which he appeared, I should never have become aware of the death's-head, and so never the possessor of the treasure?"

"But proceed—I am all impatience."

"Well; you have heard, of course, the many stories current—the thousand vague rumors afloat about money buried, somewhere on the Atlantic coast, by Kidd and his associates. These rumors must have had some foundation in fact. And that the rumors have existed so long and so continuously could have resulted, it appears to me, only from the circumstance of the buried treasure still *remaining* entombed. Had Kidd concealed his plunder for a time, and afterwards reclaimed it, the rumors would scarcely have reached us in their present unvarying form. You will observe that the stories told are all about money-seekers, not about money-finders. Had the pirate recovered his money, there the affair would have dropped. It seemed to me that some accident—say the loss of a memorandum indicating its locality—had deprived him of the means of recovering it, and that this accident had become known to his followers, who otherwise might never have heard that treasure had been concealed at all, and who, busying themselves in vain because unguided attempts to regain it, had given first birth, and then universal currency, to the reports which are now so common. Have you ever heard of any important treasure being unearthed along the coast?"

"Never."

"But that Kidd's accumulations were immense, is well known. I took it for granted, therefore, that the earth still held them; and you will scarcely be surprised when I tell you that I felt a hope, nearly amounting to certainty, that the parchment so strangely found, involved a lost record of the place of deposit."

"But how did you proceed?"

"I held the vellum again to the fire, after increasing the heat; but nothing appeared. I now thought it possible that the coating of dirt might have something to do with the failure, so I carefully rinsed the parchment by pouring warm water over it, and, having done this, I placed it in a tin pan, with the skull downwards, and put the pan upon a furnace of lighted charcoal. In a few minutes, the pan having become thoroughly heated, I removed the slip, and, to my inexpressible joy, found it spotted, in several places, with what appeared to be figures arranged in lines. Again I placed it in the pan, and suffered it to remain another minute. On taking it off, the whole was just as you see it now."

Here Legrand, having re-heated the parchment, submitted it to my inspection. The following characters were rudely traced, in a red tint, between the death's-head and the goat:

53‡‡†305))6*; 4826)4‡.)4‡); 806*; 48†8¶60))85;]8*:‡*8†83(88)5*†; 46(; 88*96*?;8) *‡ (;485);5*†2: *‡(,4956*2 (5*—4) 8¶8*; 4069285);)6†8)4‡‡; 1(‡9; 48081; 8:8‡1; 48†85; 4)485†5288 06*81 (‡9;48; (88; 4(‡?34;48)4‡;161; :188;‡?;

"But," said I, returning him the slip, "I am as much in the dark as ever. Were all the jewels of Golconda awaiting me on my solution of this enigma, I am quite sure that I should be unable to earn them."

"And yet," said Legrand, "the solution is by no means so difficult as you might be led to imagine from the first hasty inspection of the characters. These characters, as any one might readily guess, form a cipher—that is to say, they convey a meaning; but then, from what is known of Kidd, I could not suppose him capable of constructing any of the more abstruse cryptographs. I made up my mind, at once, that this was of a simple species—such, however, as would appear, to the crude intellect of the sailor, absolutely insoluble without the key."

"And you really solved it?"

"Readily; I have solved others of an abstruseness ten thousand times greater. Circumstances, and a certain bias of mind, have led me to take interest in such riddles, and it may well be doubted whether human ingenuity can construct an enigma of the kind which human ingenuity may not, by proper application, resolve. In fact, having once established connected and legible characters, I scarcely gave a thought to the mere difficulty of developing their import.

"In the present case—indeed in all cases of secret writing—the first question regards the *language* of the cipher; for the principles of solution, so far, especially, as the more simple ciphers are concerned, depend on, and are varied by, the genius of the particular idiom. In general, there is no alternative but experiment (directed by probabilities) of every tongue known to him who attempts the solution, until the true one be attained. But, with the cipher now before us, all difficulty is removed by the signature. The pun on the word 'Kidd' is appreciable in no other language than the English. But for this consideration I should have begun my attempts with the Spanish and French, as the tongues in which a secret of this kind would most naturally have been written by a pirate of the Spanish main. As it was, I assumed the cryptograph to be English.

"You observe there are no divisions between the words. Had there been divisions, the task would have been comparatively easy. In such case I should have commenced with a collation and analysis of the shorter words, and, had a word of a single letter occurred, as is most likely (*a* or *I*, for example), I should have considered the solution as assured. But, there being no division, my first step was to ascertain the predominant letters, as well as the least frequent. Counting all, I constructed a table, thus:

Of the character	8	there are 34.
"	;	" 26.
"	4	" 19.
"	‡)	" 16.
"	*	" 13.
"	5	" 12.
"	6	" 11.
"	† 1	" 8.
"	0	" 6.
"	9 2	" 5.
"	: 3	" 4.
"	?	" 3.
"	¶	" 2.
"	‖ —	"

"Now, in English, the letter which most frequently occurs is *e*. Afterwards, the succession runs thus: *a o i d h n r s t u y c f g l m w b k p q x z*. *E*, however, predominates so remarkably that an individual sentence of any length is rarely seen, in which it is not the prevailing character.

"Here, then, we have, in the very beginning, the groundwork for something more than a mere guess. The general use which may be made of the table is obvious—but, in this particular cipher, we shall only very partially require its aid. As our predominant character is 8, we will commence by assuming it as the *e* of the natural alphabet. To verify the supposition, let us observe if the 8 be seen often in couples—for *e* is doubled with great frequency in English—in such words, for example, as 'meet,' 'fleet,' 'speed,' 'seen,' 'been,' 'agree,' etc. In the present instance we see it doubled no less than five times, although the cryptograph is brief.

"Let us assume 8, then, as *e*. Now, of all *words* in the language, 'the' is most usual; let us see, therefore, whether there are not repetitions of any three characters, in the same order of collocation, the last of them being 8. If we discover repetitions of such letters, so arranged, they will most probably represent the word 'the.' On inspection, we find no less than seven such arrangements; the characters being ;48. We may, therefore, assume that the semicolon represents *t*, that 4 represents *h*, and that 8 represents *e*—the last being now well confirmed. Thus a great step has been taken.

"But, having established a single word, we are enabled to establish a vastly important point; that is to say, several commencements and terminations of other words. Let us refer, for example, to the last instance but one, in which the combination ;48 occurs—not far from the end of the cipher. We know that the semicolon immediately ensuing is the commencement of a word, and, of the six characters succeeding this 'the,' we are cognizant of no less than five. Let us set these characters down, thus, by the letters we know them to represent, leaving a space for the unknown—

t eeth.

"Here we are enabled, at once, to discard the *'th,'* as forming no portion of the word commencing with the first *t;* since, by experiment of the entire alphabet for a letter adapted to the vacancy we perceived that no word can be formed of which this *th* can be a part. We are thus narrowed into

t ee,

and, going through the alphabet, if necessary, as before, we arrive at the word 'tree,' as the sole possible reading. We thus gain another letter, *r,* represented by (, with the words 'the tree' in juxtaposition.

"Looking beyond these words, for a short distance, we again see the combination ;48, and employ it by way of *termination* to what immediately precedes. We have thus this arrangement:

the tree ;4(‡?34 the,

or, substituting the natural letters, where known, it reads thus:

the tree thr‡?3h the.

"Now, if, in place of the unknown characters, we leave blank spaces, or substitute dots, we read thus:

the tree thr . . . h the,

when the word *'through'* makes itself evident at once. But this discovery gives us three new letters, *o, u* and *g,* represented by ‡, ? and 3.

"Looking now, narrowly, through the cipher for combinations of known characters, we find, not very far from the beginning, this arrangement,

83(88, or egree,

which, plainly, is the conclusion of the word 'degree,' and gives us another letter, *d*, represented by †.

"Four letters beyond the word 'degree,' we perceive the combination

;46(;88*.

"Translating the known characters, and representing the unknown by dots, we read thus:

th.rtee,

an arrangement immediately suggestive of the word 'thirteen,' and again furnishing us with two new characters, *i* and *n*, represented by 6 and *.

"Referring, now, to the beginning of the cryptograph, we find the combination,

53‡‡†.

"Translating, as before, we obtain

.good,

which assures us that the first letter is *A*, and that the first two words are 'A good."

"To avoid confusion, it is now time that we arrange our key, as far as discovered, in a tabular form. It will stand thus:

5	represents	a
†	"	d
8	"	e
3	"	g
4	"	h
6	"	i
*	"	n
‡	"	o
(	"	r
;	"	t

"We have, therefore, no less than ten of the most important letters represented, and it will be unnecessary to proceed with the details of the solution. I have said enough to convince you that ciphers of this nature are readily soluble, and to give you some insight into the *rationale* of their development. But be assured that the specimen before us appertains to the very simplest species of cryptograph. It now only remains to give you the full translation of the characters upon the parchment, as unriddled. Here it is:

"A good glass in the bishop's hostel in the devil's seat twenty-one degrees and thirteen minutes northeast and by north main branch seventh limb east side shoot from the left eye of the death's-head a bee line from the tree through the shot fifty feet out."

"But," said I, "this enigma seems still in as bad a condition as ever. How is it possible to extort a meaning from all this jargon about 'devil's seats,' 'death's-heads,' and 'bishop's hotels'?"

"I confess," replied Legrand, "that the matter still wears a serious aspect, when regarded with a casual glance. My first endeavour was to divide the sentence into the natural division intended by the cryptographist."

"You mean, to punctuate it?"

"Something of that kind."

"But how was it possible to effect this?"

"I reflected that it had been a *point* with the writer to run his words together without division, so as to increase the difficulty of solution. Now, a not over-acute man, in pursuing such an object, would be nearly certain to overdo the matter. When, in the course of his composition, he arrived at a break in his subject which would naturally require a pause, or a point, he would be exceedingly apt to run his characters, at this place, more than usually close

together. If you will observe the MS., in the present instance, you will easily detect five such cases of unusual crowding. Acting on this hint, I made the division thus:

"A good glass in the Bishop's hostel in the Devil's seat—twenty-one degrees and thirteen minutes—northeast and by north—main branch seventh limb east side—shoot from the left eye of the death's-head—a bee-line from the tree through the shot fifty feet out."

"Even this division," said I, "leaves me still in the dark."

"It left me also in the dark," replied Legrand, "for a few days; during which I made diligent inquiry, in the neighbourhood of Sullivan's Island, for any building which went by the name of the 'Bishop's Hotel'; for, of course, I dropped the obsolete word 'hostel.' Gaining no information on the subject, I was on the point of extending my sphere of search, and proceeding in a more systematic manner, when, one morning, it entered into my head, quite suddenly, that this 'Bishop's Hostel' might have some reference to an old family, of the name of Bessop, which, time out of mind, had held possession of an ancient manor-house, about four miles to the northward of the island. I accordingly went over to the plantation, and re-instituted my inquiries among the older negroes of the place. At length one of the most aged of the women said that she had heard of such a place as *Bessop's Castle*, and thought that she could guide me to it, but that it was not a castle, nor a tavern, but a high rock.

"I offered to pay her well for her trouble, and, after some demur, she consented to accompany me to the spot. We found it without much difficulty, when, dismissing her, I proceeded to examine the place. The 'castle' consisted of an irregular assemblage of cliffs and rocks—one of the latter being quite remarkable for its height as well as for its insulated and artificial appearance. I clambered to its apex, and then felt much at a loss as to what should be next done.

"While I was busied in reflection, my eyes fell upon a narrow ledge in the eastern face of the rock, perhaps a yard below the summit on which I stood. This ledge projected about eighteen inches, and was not more than a foot wide, while a niche in the cliff just above it, gave it a rude resemblance to one of the hollow-backed chairs used by our ancestors. I made no doubt that here was the 'Devil's seat' alluded to in the MS., and now I seemed to grasp the full secret of the riddle.

"The 'good glass,' I knew, could have reference to nothing but a telescope; for the word 'glass' is rarely employed in any other sense by seamen. Now here, I at once saw, was a telescope to be used, and a definite point of view, *admitting no variation*, from which to use it. Nor did I hesitate to believe that the phrases, 'twenty-one degrees and thirteen minutes,' and 'northeast and by north,' were intended as directions for the levelling of the glass. Greatly excited by these discoveries, I hurried home, procured a telescope, and returned to the rock.

"I let myself down to the ledge, and found that it was impossible to retain a seat on it unless in one particular position. This fact confirmed my preconceived idea. I proceeded to use the glass. Of course, the 'twenty-one degrees and thirteen minutes' could allude to nothing but elevation above the visible horizon, since the horizontal direction was clearly indicated by the words, 'northeast and by north.' This latter direction I at once established by means of a pocket-compass; then, pointing the

glass as nearly at an angle of twenty-one degrees of elevation as I could do it by guess, I moved it cautiously up or down, until my attention was arrested by a circular rift or opening in the foliage of a large tree that overtopped its fellows in the distance. In the centre of this rift I perceived a white spot, but could not, at first, distinguish what it was. Adjusting the focus of the telescope, I again looked, and now made it out to be a human skull.

"On this discovery I was so sanguine as to consider the enigma solved; for the phrase 'main branch, seventh limb, east side,' could refer only to the position of the skull on the tree, while 'shoot from the left eye of the death's-head' admitted, also, of but one interpretation, in regard to a search for buried treasure. I perceived that the design was to drop a bullet from the left eye of the skull, and that a bee-line, or, in other words, a straight line, drawn from the nearest point of the trunk through 'the shot' (or the spot where the bullet fell), and thence extended to a distance of fifty feet, would indicate a definite point—and beneath this point I thought it at least *possible* that a deposit of value lay concealed."

"All this," I said, "is exceedingly clear, and, although ingenious, still simple and explicit. When you left the Bishop's Hotel, what then?"

"Why, having carefully taken the bearings of the tree, I turned homewards. The instant that I left 'the Devil's seat,' however, the circular rift vanished; nor could I get a glimpse of it afterwards, turn as I would. What seems to me the chief ingenuity in this whole business, is the fact (for repeated experiment has convinced me it *is* a fact) that the circular opening in question is visible from no other attainable point of view than that afforded by the narrow ledge on the face of the rock.

"In this expedition to the 'Bishop's Hotel' I had been attended by Jupiter, who had, no doubt, observed for some weeks past, the abstraction of my demeanour, and took especial care not to leave me alone. But, on the next day, getting up very early, I contrived to give him the slip, and went into the hills in search of the tree. After much toil I found it. When I came home at night my valet proposed to give me a flogging. With the rest of the adventure I believe you are as well acquainted as myself."

"I suppose," said I, "you missed the spot, in the first attempt at digging, through Jupiter's stupidity in letting the bug fall through the right instead of through the left eye of the skull."

"Precisely. This mistake made a difference of about two inches and a half in the 'shot'—that is to say, in the position of the peg nearest the tree; and had the treasure been *beneath* the 'shot,' the error would have been of little moment; but 'the shot,' together with the nearest point of the tree, were merely two points for the establishment of a line of direction; of course the error, however trivial in the beginning, increased as we proceeded with the line, and by the time we had gone fifty feet, threw us quite off the scent. But for my deep-seated convictions that treasure was here somewhere actually buried, we might have had all our labour in vain."

"I presume the fancy of *the skull*, of letting fall a bullet through the skull's eye—was suggested to Kidd by the piratical flag. No doubt he felt a kind of poetical consistency in recovering his money through this ominous *insignum*."

"Perhaps so; still I cannot help thinking that common-sense had quite as much to do with the matter as poetical consistency. To be visible from the 'Devil's seat,' it was necessary that the object, if small, should be white; and

there is nothing like your human skull for retaining and even increasing its whiteness under exposure to all vicissitudes of weather."

"But your grandiloquence, and your conduct in swinging the beetle—how excessively odd! I was sure you were mad. And why did you insist on letting fall the bug, instead of a bullet, from the skull?"

"Why, to be frank, I felt somewhat annoyed by your evident suspicions touching my sanity, and so resolved to punish you quietly, in my own way, by a little bit of sober mystification. For this reason I swung the beetle, and for this reason I let it fall from the tree. An observation of yours about its great weight suggested the latter idea."

"Yes, I perceive; and now there is only one point which puzzles me. What are we to make of the skeletons found in the hole?"

"That is a question I am no more able to answer than yourself. There seems, however, only one plausible way of accounting for them—and yet it is dreadful to believe in such atrocity as my suggestion would imply. It is clear that Kidd—if Kidd indeed secreted this treasure, which I doubt not—it is clear that he must have had assistance in the labour. But, the worst of this labour concluded, he may have thought it expedient to remove all participants in his secret. Perhaps a couple of blows with a mattock were sufficient, while his coadjutors were busy in the pit; perhaps it required a dozen—who shall tell?"

THE END

Anniversary of the Birth of Edgar Allan Poe

The one-hundred and twenty-fifth anniversary of the birth of Edgar Allan Poe has been celebrated by a dinner in Philadelphia, attended by thirteen hundred people. George Bernard Shaw cabled that "at last America has recognized the greatest American writer." Poe was entitled by President Roosevelt "the greatest literary genius of the country." His life was a tragedy of poverty. His wife was Virginia Clemm, a girl but thirteen years old at the time of the marriage, who was even then consumptive and who lived but a decade. Poe was treated unkindly by his early biographers for reasons unknown. On the face of it, could a more severe critic be looked for than the mother of his girl wife? She lived with him and her daughter in poverty, but she was his affectionatte and devoted friend of many years. And it was Maria Clemm, Virginia's mother, who declared that "he was impulsive, generous, affectionate and noble." He lived only forty years; he was born January 19th, 1809, and died October 7th, 1849.

"Why Read AMAZING STORIES?"

By EUGENE REYNOLDS

There it was! On the newsdealer's rack! A mighty giant, who put out an enormous hand reaching for three tiny people!

"Why read it?" asked someone nearby. "For recreation, relaxation, and knowledge!" was my ready response; however, lack of time prevented my adding other reasons or emphasizing those named!

Wilson, Theodore Roosevelt and others used to read books dealing with crime and its detection in order to "clean out their minds" and prepare their brains for new tasks facing them daily. The more unlike the subject of the books was to their usual thinking, the "cleaner" the mind became! AMAZING STORIES, even more unlike the ordinary person's experience, is of more value along this line than is the mystery or detective story!

Reading these stories makes one familiar with efforts being made along different lines in the scientific world. Of course, they go beyond accomplishment into the realm of pseudo-science, yet through the story alone, the *average* person is able to familiarize himself with science. It requires exaggeration to secure his attention! Moreover this is about the only way he will give enough thought to the subject to grasp what science is attempting. And the story enables him to remember facts. Before anything is learned, the interest must be aroused!

Nor can you be certain just how much contained in a given story is within the realm of the impossible! Witness the radio, television, and other inventions and discoveries. We may have, so far, only scratched the surface of the undiscovered,—and supposedly unknowable!

At least we know there are individuals who are searching and studying continually along these lines. And they are bound to discover some new things! We yet may accept as true: "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy!"

And many so-called *new* discoveries were evidently either known or "suspected to be in the air" by the ancients. And one of their theories was that beyond the cold of the polar regions, lies a land of summer with beautiful flowers, and an ideal climate. How do we know they were absolutely wrong in their idea? Who can [illegible]?

In this department we shall discuss every month topics of interest to readers. The editors invite correspondence on all subjects directly or indirectly related to the stories appearing in this magazine. In case a special personal answer is required, a nominal fee of 25c to cover time and postage is required.

A Letter from a Young Australian Reader Who Seems to Like AMAZING STORIES

Editor, AMAZING STORIES:

A letter for the Discussions Columns. Of course it may not be printed, but I do enjoy writing to my favorite magazine, and I suppose the Editor likes to hear from his readers overseas.

I have quite an immense pile of AMAZING STORIES magazines now, and I store them away with such miserly care that people think I'm a little mad. It *is* a silly habit, this saving of countless magazines, but I just can't bring myself to part with my copies.

It's strange how the passing of years broadens the mind. Some time ago I wrote you two letters. I have just looked them up, and I find that they are senseless conglomerations of voluble and denunciatory criticism; amazing constructions of warped personal opinions. Now, with the passing of only twenty-four months, I have learned the meaning of understanding and tolerance; and from the superior eminence of Aged Seventeen I can look back with supercilious horror and disgust at my former harsh, juvenile criticisms.

The thing of most importance that I have to say about your magazine is that it is steadily and unceasingly improving. I mean this sincerely. For a study of AMAZING STORIES reveals the following:

The covers are now amazing without being extravagant; the binding has become more staple, more solid in all ways; the stories are being selected with taste and care; the advertising space has been cut down in accordance with a growing circulation (at least, I assume that the circulation is growing. Is it?)

For 1932 I chose as best, these stories:

Best serial.—— "The Swordsman of Sarvon." For its sustained action, originality and concise style.

Best novelette.—— "The Cities of Ardathia." Because it is an attempt—and a not unsuccessful one—at better class sciencefiction. I would like to see more from Mr. Flagg.

Best short story.——"The Man Who Lived Twice." This was scientific and there were big possibilities in it.

1933 started well and I know it will continue thus. The April issue was especially good. Now that A. Hyatt Verrill has come back, I suggest, with all humility, that his work would be far more interesting if he condensed each story to half the length to which he usually carries it.

I like Dr. Keller's work well enough, but in his striving after simplicity of narrative, it seems to me that he borders on the affectation that it would appear he is so anxious to avoid.

I noticed something queer in the September 1932 issue. The Science Questionnaire asks how many feet of lead cosmic rays will penetrate; in the story "The Lady of Light," the answer is given as eight feet. And yet on page 519 of the same issue, another author tells us that the rays will pass through *seventeen* feet of lead. Why this contradiction? It would seem to suggest that the scientific facts in your tales are not as scrupulously verified as you would have us believe. Please clear up the point for me.

A belated word on the remarkable innovation that saw the light of day on the cover of the January 1933 number: This is distinctly superior to any cover that I have seen prior to it. Certainly it came as a shock—an extraordinary shock—to find it on your so reserved and aloof a magazine, and a one-color cover at first savored of meanness to me; but after a study of it I decided that I vastly prefer it to some of the hideous pictures that have leered at me from your front page in the past. This cover and the altered arrangement of the letters "Amazing Stories," reveal that you are *not* afraid to get away from your former dispassionate attitude toward all forms of innovation. Morey still can't draw a human face with any degree of fidelity. And in spite of what may be said against Impressionism, I definitely prefer it to bad sketching.

(Incidentally, why did you refuse to give us more of Muller? Actual count of letters published in your columns reveals that he was favored by the majority. After all, his work was merely Modern: it did not go as far as Impressionism.)

But enough of Impressionism, Cubism and all other kinds of unorthodox art. We'll leave discussion of them to their vehement neophytes.

To end this letter I would like to tell your readers that I'm very anxious to read the single AMAZING STORIES Annual that was published, and also the story "The Moon Pool"; and I would like to hear from anyone who has these magazines to sell or exchange.

A. CONNELL,
Military Road, Mosman,
Sydney, Australia.

(We always get pleasant letters from the Antipodes although we do not always have to go ten or twelve thousand miles to get a pleasant appreciation of our efforts. In giving the best stories, or what the writer considers such, interest is added by the little criticism following each one of them. "A reason for the faith that is in him." We do not know what Mr. Verrill will think when he reads your criticism of his methods. We are going to give some of his work in a number of our issues in the near future, starting with the June issue. As far as the penetration of lead by cosmic rays is concerned, it varies greatly according to the locality and many statements of the penetrating power have been given by Compton, Millikan and others. This will clear up your points of criticism. As far as innovation is concerned, AMAZING STORIES has done lots of it on the cover page. The cover you refer to is not a one color printing. If you do not hear from anybody who has the issues you want for sale, address our Circulation Department in this building.—EDITOR.)

A Tribute to Dr. E. E. Smith from a Canadian Admirer

Editor, AMAZING STORIES:

My first copy of scientifiction I picked up three years ago, and I was so thrilled with that story of Neptunians trying to bust up the sun that I couldn't sleep that night. Since then I—am here.

Reading over my back copies of scientifiction, mostly, A. S., I find so many stories that are very, very good. One of my outstanding impressions is the Jameson Satellite. It is beautifully written and the idea is very appealing. Williamson's stories are unique for their tremendous technical detail. They require real study and as such have depth and sustained interest. However, one does not particularly remember his characters and stories; one remembers that one has immensely enjoyed reading them.

The real classics of scientifiction, and I do not exclude Wells, Verne, Burroughs, etc., are those marvelous series by Dr. E. E. Smith. They have technical detail, and one may appreciate the possibility that Smith can build this up as much as Williamson, but he does not write quite that way. They require deep thought, they command intense, sustained interest, they are powerfully written, full of brilliant ideas. They have that appeal of character and story that impels one to reread them often and ever. And the first installment of "Triplanetary" is in the authentic Seaton tradition.

A. LAZARESCO, PH. D.
32 Glenholme Avenue,
Toronto, Canada.

(The stories of the Jameson Statellite, we believe, have been very generally appreciated at their true value. There seems to be a peculiar talent involved in the production of such stories as embody romance and natural science. Too much science will tend to make them read like a text book. Too little science takes them out of our range. You will like "Triplanetary" as it goes along. As our magazine has only recently been published in Canada, we are greatly interested in getting letters from Canadian correspondents.—EDITOR.)

A Short and Warm Appreciation of Our Magazine

Editor, AMAZING STORIES:

"Triplanetary" starts out with a bang! Hope it ends that way. I had the ill luck to miss Dr. Smith's "Skylark" series. From all the letters I've read, I guess they were plenty good. Are you going to give us a story by C. A. Smith sometime soon? Morey did a swell job on the cover for "Triplanetary." Hope you received my subscription for a year of this wonderful magazine. My only regret is that it isn't published twice a month. Well before this letter gets too lengthy, I will close.

OLON F. WIGGINS,
2603 Curtis Street,
Denver, Colorado.

(You will find that "Triplanetary" will keep on "banging" right up to the last word of the story. We have on hand a story by the author you refer to, though we are not sure what issue it will appear in. The Editorial Staff would be greatly pleased if the magazine could be published twice a month and we have ample material to carry out such a plan, but it is in the dim future, even if it is there.—EDITOR.)

A Tribute to the Author, Frank K. Kelly

Editor, AMAZING STORIES:

I have just finished reading your December issue and have been converted into an A. S. fan. Your thanks, if any, may be given to Frank K. Kelly's "Into the Meteorite Orbit."

I have followed Mr. Kelly's career closely and I believe he has promise of a great future. Incidentally Mr. Kelly is the only author of Science Fiction to be read by my parents.

We all sincerely hope to read more Kelly stories in your magazine soon. When is the next?

R. J. OLE,
Indianapolis, Indiana.

(Mr. Kelly's story evidenced considerable thought on the part of the author. It involves one odd thing in its name that properly speaking there is no meteorite orbit, or perhaps properly speaking there is, but a name is not supplied by the powers that be. A shooting star is a meteor; if one of them strikes the earth it becomes a meteorite, but what is it before it becomes luminous and before it falls to *terra firma?* There is a question for the lexicographer. We have another story on hand by Mr. Kelly which we will print soon.—EDITOR.)

A Young Reader Wants More Illustrations—He Likes the Smaller Size of Page—Stories of Prehistoric Animals Asked For

Editor, AMAZING STORIES:

This is the first time I have ever written to the AMAZING STORIES and am very much interested in your magazine. Once I was talking to my uncle about this magazine. He asked me why I read such bunk, and told me to read something true. I told him that A. S. stories gave you pleasant dreams and exciting ones and also create a good imagination. I also told him I hope most of the stories came true some day. In less than a week I found him reading one and enjoying it. I have a club to which just another boy and I belong. I often try to get others to join and start talking to them about infra-red rays, space ships, planets or prehistoric animals. They just look at me and blink their eyes and look dumb. The only boy I can talk freely to is my pal. I haven't many complaints to make about your magazine, but some of them are: 1. I wish you would have more pictures through your stories. 2. I wish Paul would illustrate for your magazine again. 3. I wish you would write more stories on prehistoric animals and life of the cave people.

I hope you keep the magazine at the same size it is now for it is handy. Some of the stories I have liked best in the old mags were: 1. "The Stone from the Green Star." 2. "The Prince of Space." 3. "The Drums of Tapajos." 4. "Tanks Under the Sea." 5. "The Universe Wreckers." 6. "Across the Void." 7. "The Incredible Formula," and many others. I am not very hard to please, but I like cave stories better. Couldn't you publish some of Edgar Rich Burroughs stories and illustrate them all through the stories? Why don't you put up a vote and see who would like them?

CHARLES PIERCE,
827 Bell Avenue,
Los Angeles, Calif.

(We have published in the past a number of stories about prehistoric days, the ways of the cave-man, the saber toothed tiger, the pterodactyl, and other monsters of the past, and we shall hope to get more of this type, but of course we depend upon our writers. We are overstocked with stories and we feel strongly that the authors of the same are entitled to first consideration in date of publication.—EDITOR.)

A Letter from a Member of the Fair Sex Who Likes AMAZING STORIES

Editor, AMAZING STORIES:

As a member of the so-called "fair-sex" I expect, nay demand, that my letter be published. Otherwise, I certainly will have to renew my subscription which expires soon, in order to see whether it might be published in a much later issue.

I have been enjoying myself only since July because it was then that I discovered A. S. I have been a strong advocate of it ever since, and have defended it from the slights of my friends who think it is a cheap "thriller" magazine, because they know it in name only. That was exactly how I felt before I started to read A. S. and I would still be ignorant of the delight which comes from reading such stories as yours, were it not for another friend. Therefore, why not do yourself and many prospective readers a great favor by changing the name from AMAZING STORIES to AMAZING SCIENCE FICTION STORIES. I know I am asking a great deal, but it is not to benefit myself that I ask it for I already know the merits of A. S. I am thinking of those who are pining for just such stories as are found in our magazine, but who do not connect the name A. S. with science fiction. For your own good, won't you do as I ask? The name, A. S. still remains, so that old readers will know it, and the new addition, science fiction, will gain for you readers by the hundreds.

To come back to less important subjects but which do much to lift a magazine far above the mediocre or even the average, I want to know why you haven't been consistent in the criticism of books. One issue has it and the next issue has not. Is it because the supply of scientific books has run out? Well, then, there's always the movies to fall back upon. They have recently been favoring us with films sprinkled with imaginative science, such as the "Invisible Man."

I must tell you that I find Discussions so very interesting that it is the first thing I turn to when reading the magazine. It is almost like a story, showing us, who can read between the lines, the psychology of the people who write therein. The Editor's personal answer at the end of each letter is one feature which has endeared A. S. to me, for it tends to bind editor and reader in a closer and more intimate relationship.

I have just read the January 1934 issue and it seems that you have started the new year right. I especially feel this way since I am intensely interested in the mind and its psychology. No matter how absorbing planetary stories may be, they do get boring when there are too many. Thus, it is not asking too much to give us psychology readers "a break" and print more stories like the "Pellucid Horror," "Master of Dreams," and the "Lost Language."

I have made many requests and I have still another to make; this, I promise will be the last. Seeing that your editorial is becoming bigger and better with each issue, I would like to suggest a fitting topic for this feature. It is "the microscope and its use." I feel that there are many readers who, like myself, have for a hobby the field of microscopy. I am just an amateur and certainly would appreciate it if you could set forth in your editorial how to use the various types of microscopes and where

to find specimens, I am sure that it will require more than one editorial to cover this fascinating study.

I have never read your Quarterly, but I see that the latest issue is out. You might hear from be about its effects, and again, you might not. So don't depend upon it, but do tell me how you've liked my ravings.

Miss Rea Ash,
1001 East 167th Street,
New York City, N. Y.

(We always get nice letters from members of your sex. You do not indulge in throwing brickbatz at the unfortunate staff of this magazine. The name you suggest is too long and the two-word name is known all over the world and it would seem wrong to change it, and introducing two words in the middle of the old name would be a great change and there would hardly be room for it to be adequately displayed upon the cover. "Discussions" are certainly a very interesting part of the magazine and we wish to make them a very important element. The personal desire of the Editor would almost go so far as to wish to give them double the amount of space they now have. There is so much variety in the different letters that the Discussions are always novel and always of interest. As regards microscopy, that is best studied from manuals. It is a special branch of work and has the quality of entrancing those who practice it.—Editor.)

A Lady Writes Us a Charming Letter of Warm Appreciation

Editor, Amazing Stories:

After taking a look at the present Amazing Stories, I am at last convinced that the Depression is over, for gone is the thin hungry looking magazine replaced by a nice fat one, even though it is much shorter in height. Anyway please excuse my remarks as I'm only trying to tell you how much I like A. S. I shall never forget that fateful???? day over six years ago when I got my hands on my first copy which has been the cause of my downfall, for ever since I could never resist getting every copy that came out. Even though I am not a regular subscriber, I very seldom missed any.

As to the stories, well I'm not throwing any bricks because almost all of the stories you have published so far, have been in my estimation excellent, each in its own way. Although the kinds which I prefer above all are the ones dealing with time—space traveling, the past or future and about the different planets of the universe.

And now, Mr. Editor, I'd like a word or two with some of our readers. I wish many of you who throw bricks so lavishly at some poor author would stop to think that even though he can't please everybody after all he is only human and a flower or two and some words of encouragement would do far more good for better or worse than a ton of bricks so why not throw fewer bricks and more flowers? But I guess this queer old world would not seem natural if there weren't any people fighting and scrapping and arguing about something all the time. Thank you, Mr. Editor. And now before you carefully deposit this letter in the waste basket, I wish you to know that I'm sending you and our mag. the best wishes and luck for the coming year. Were you listening?

Miss E. M. C. Poppe,
Box 727,
W. Brownsville, Pa.

(We enjoy letters from members of the "fair sex" provided they restrict themselves to fairness and are not unfair, but this correspondent is so good-hearted that she advocates the throwing of flowers rather than bricks. You ask us if we were listening to your concluding good wishes, and we want to state that we certainly were.—Editor.)

A Warm Appreciation of Our Authors and Artist Morey—Love Motive in Science Fiction Stories

Editor, Amazing Stories:

I have been an appreciative reader of Amazing Stories for several years, but as yet have not expressed any criticisms regarding the authors, artists or materials contained in the magazine. As a matter of fact this is my first attempt to communicate with you and it is scarcely fitting that I should begin with a bombardment. Rather I would beg your tolerance and correct my errors, literally or otherwise, because, being a foreigner and having attended English schools only a few years I have small doubt of my ability to master the English language.

Not wishing to individualize any one subject in particular I will make my topics as general as possible and hope you will excuse my aimless wanderings. First of all I wish to offer my appreciation and congratulations on your Canadian Branch of Amazing Stories. This enables many ardent followers of your magazine over here to avail ourselves of this opportunity to continue reading Amazing Stories which, otherwise would be denied us. I said otherwise, because, on account of the high Canadian tariff wall, coupled with the depreciation of the Canadian dollar, we were unable to purchase direct from the U.S.A., that is from publisher to reader. I can safely state that you, yourselves, have been quite aware of this fact for the past two years or more when you found Canadian sales dropping off. It stands to reason that the average reader cannot afford to pay thirty-five cents or more for one copy of any magazine during such times of depression, therefore, the dealers were not foolish enough to stock them. But with your present system of a branch over here Canadian readers of Amazing Stories will no longer have any difficulties in obtaining their regular

copies, and I have no doubt but that your sales have already increased perceptibly and profitably.

Reading through your "Discussions" columns I cannot help noticing the praises and criticisms on the authors, artists and stories. Of course it is every person's right to have his or her individual opinions. But, personally I think it is a gross injustice to attack the authors and artists. Some people evidently have a very poor sense of imagination and practicability. They have little comprehension of the vast account of imagination and concentration necessary for an author to pen his ideas, situations and characters to paper, especially if the narration happens to be science fiction, which calls for altogether different and novel constructions. A science fiction author is a scientist, inventor, engineer, historian, etc., if not in fact then surely in knowledge. So we can see what obstacles such an author would encounter and, would not be human if he did not make an error, theoretically or factually, once in a while.

It is the same with artists, and I for one, indignantly resent Miss (I presume) Margaret Young's statement: "I do not like Morey's illustrations." It was rather a blunt and candid statement, and to the point. But first, be it understood that I am not criticising the Ohio lady's view-point; far be it from me to argue with any member of the fair sex—any man should know better. But it is true that I do resent her statement in regard to Mr. Morey. I have no idea what other works of art Mr. Morey is engaged in, but it is a certainty that his illustrations in the magazine are more than worthy of praise and deserve a great deal of credit. The work of a scientific artist is even more difficult than that of the author. The author is fore-armed with the knowledge of what he is going to create, therefore his work is that much simpler, whereas, on the other hand, the artist is not, and has to create mentally from what he reads in the story, which often as not, is insufficient in details. He has to transfer that mental image to reality on paper to fit the author's conception of it as much as possible. He does not paint to suit himself or the readers as much as he wants to faithfully portray the author's original thought. If his creations are monstrosities and impossibilities we should not criticise him, because he is painting only what is required of him by the story. If we continue to criticise the artists they might be withdrawn, and if the illustrations are cut out, the magazine would not be half as interesting.

Regarding the stories themselves I can safely say that seventy-five percent. of them are exceptionally good in plot, construction and scientific data. Where most of them fall down is in scientific details; a good many leave the science factor absolutely flat and not a few of them make the reader wonder why they are called science stories. Noticeably absent in a majority of the stories is the element of romance. Of course, essentially speaking, romance is not usually associated with science, but we must not forget that these stories are also fiction and a romantic vein always heightens the interest of the reader. After all we are still human and as such we are always susceptible to the pathos of that age-old figure, Cupid. Another noticeable fact that might bear mentioning is the length of the stories, most of them being too short. This type of story is usually crammed full of scientific explanations with very little action and space. The reader does not get a chance to absorb all the details before the story is finished. Certainly he feels as if he were precipitated into a cyclone, turned end over end, bounced a couple of times, then dumped on the ground and left uncomprehending, like a man just coming out of a nightmare. I'd much rather have one or two novel-length stories than a flock of shorts.

However, I'd better terminate this letter before I utter too much, for no author or artist can please everybody. But I'd be much obliged if you could give me some dope on some future scienti-films, viz: date of release, name of producing company, type of film, feature players, etc. If this is too much bother just let it slide, and thanks just the same.

WILLIAM WONG,
King Street,
Cobourg, Ont.,
Canada.

(This letter from a Canadian correspondent indicates a very full appreciation of our efforts incident to the publishing of AMAZING STORIES. Our artist Morey's work is appreciated and we can assure you and our other readers that he is giving his best thought to his illustrations. You will find that we have sometimes put a little love motive into some of our pages. It appears, for instance in "The Terror Out of Space." But some of our readers object to anything of this sort. Your letter, in which you embodied well-thought-out criticism, will be enjoyed, we are certain, by our readers. The fact that a reader writes so elaborate a review of an issue of AMAZING STORIES certainly speaks well for its contents.—EDITOR.)

A Reply to a Critic from a Valued Author

Editor, AMAZING STORIES:

Thank you for the opportunity to reply to Mr. Latham's interesting criticisms of "When the Universe Shrank." Mr. Latham can sure heave a wicked brick-bat, and he's a pretty good shot with them, too.

However, I think I can dodge them all right this time and show him that I wasn't so far wrong after all.

In the first place I can assure Mr. Latham that I made no mistake in the distinction between mass and weight (I have been a teacher

of Physics for many years and have spent many weary hours trying to convince pupils of this very distinction), in fact I very carefully considered that point before daring to use the pushing incident.

I think that further consideration will show Mr. Latham that the event is possible, though very improbable as I am quite prepared to admit. Remember that the circumstances were pretty desperate.

Now even on earth an average man can move a very considerable mass with ease provided friction and gravity resistance are small. Take for instance the ease with which a man can start a heavy automobile rolling by pushing it along a smooth road on the level. Now in this case the resistance is well over 90 percent friction, which means that only a very small portion of the resistance is due to mass inertia.

Out in free space there would be absolutely no friction and absolutely no gravitational drag that would be detectable, so that every bit of energy would go into the required spot. Then again, out in space a man's muscles are free from earth's drag and I am convinced from careful thought that out there, if we ever get there, we shall find our mental and physical powers tremendously increased through this very freedom from earth-drag. Now add another factor. It is well known that under conditions of desperation a man can exert many times his normal power for a short time. Here was a man in a position of the utmost deperation, a man with a world to save, a man with the girl of his heart in the most hideous danger. Figure that part out for yourself, Mr. Latham, and see how much effort he could put forth.

I may add that before using this incident, which I expected to be questioned, I covered a good many sheets of foolscap with mathematics until I was finally convinced that it *was* just possible, though I may have slipped up in the length of the rod. The rod, of course, might be of much greater length than sixteen feet, for it would be easy to handle out in space through its weightlessness (not its masslessness) and would no doubt be made of some metal alloy far more highly resistant than any yet produced on earth.

The other point about the shrinkage of vehicles, etc., is also well taken, but Mr. Latham has, I'm afraid not read very carefully here. The reduction to 1/35 in size was in volume, not in length, which is very different and also it must be quite obvious that the earth's diameter shrank as the earth itself shrank, otherwise there would have been no shrinkage of land areas.

I am fully prepared to admit that this shrinkage would cause almost incredible inconvenience, and before writing the story I made a list of these difficulties which numbered nearly a hundred items. In the end, however, I decided that it was not necessary to drag in the explanation of them for these reasons:

The changes took place slowly over a great number of years. Therefore an advanced civilization would be able to meet them and adapt their lives to them so that, despite inconvenience and suffering, life would still be endurable.

To include explanation of these difficulties would increase the length of the story beyond reasonable limits without adding a thing to the interest. To put it the other way, it would kill interest through tediousness.

Then one assumes that the reader of science-fiction has his own imagination and, as Mr. Latham himself has obviously done, they like to use that imagination on such problems.

The "drag on the intellect" through the shrinkage not affecting organic bodies does not seem to me to be any greater than that due to trying to visualize the actual shrinkage itself, yet that shrinkage was actually prophesized by one of our greatest physicists. It is, of course, obvious that something like that must have occurred. Otherwise no one would have been in any way conscious of the shrinkage. In fact such phenomena may be in progress right now for all we can tell.

Perhaps, after reading these explanations Mr. Latham will conclude that my science is neither so "execrable" nor so "unpardonable" as he appears to think. The strength of his expressions rather tempts me to retort by asking him to remember the proverb about the dangers of "a little knowledge." I admit I haven't any too much myself, but at least I did take a degree in Physics from England's finest university, so the term "execrable" rather tickles my fancy.

This explanation is already too long, and I don't want to hog all the Discussions Column, If Mr. Latham is still unsatisfied I am always glad to argue the matter further if he cares to write to me direct and heave his brickbats straight at me, instead of bouncing them off the poor editor.

With all good wishes to the editorial staff and to the critics.

J. Lewis Burtt,
Jesmond, B. C.,
Canada.

(One of our best known authors publishes a reply to a critic of the story "When the Universe Shrank." The letter is so long that we do not feel that comment is needed. It is so easy to criticize unfavorably that too many people yield to the temptation, but Mr. Burtt is well able to take care of himself.—Editor.)

Back Numbers of Amazing Stories for Sale

Editor, Amazing Stories:

I am an eager reader of Amazing Stories magazine and I think that it is the best science fiction magazine on the market.

I am a self-styled author and I hope to send you a manuscript some time in the future. I wish to become a regular contributor to your pages.

J. M. Walsh, Jack Williamson and Neil R. Jones are my three favorite authors, although I have many others listed.

Listen, you readers! Due to financial circumstances, I am forced to sell what back issues of A. S. I have, in order to subscribe for future issues. These are the ones I have:

Volume 5—Nos. 3, 5. Vol. 6—Nos. 9, 10, 11, 12. Vol. 7—Nos. 1, 2, 3, 12. Vol. 8—Nos. 2, 3, 6, 7. Also WINTER 1932 AMAZING STORIES QUARTERLY. These magazines are all minus covers, but one, otherwise intact. I will sell all fifteen magazines for $2.25, postpaid to any address in the U. S. No orders outside of U. S. accepted.

No less than five magazines will be sent in one order. These five will cost 75c C.O.D. any additional magazines will cost 15c extra. Postage will be paid on 10 or more. The Quarterly alone will be sent for 25c C.O.D. If you wish to buy five or more of the above magazines, send the required amount.

I will welcome correspondence with any A. S. reader.

HAROLD GARRETT,
1320 E. 7th Street,
Sedalia, Mo.

Back Numbers for Sale

Editor, AMAZING STORIES:

Congratulations on the eighth anniversary of your, or rather "Our Magazine"! As an interested reader I have followed its slow upward evolution to its present high place in an increasingly competitive field. Unfortunately, during the past year and a half I have been forced to forego the entertainment offered by your publication and I see no prospects of altering this state of affairs. Therefore I am taking this step in disposing of the back numbers which I have carefully accumulated during the years. I would appreciate it as a personal favor if you would print this letter in your "Discussions" column beneath the caption, "Back Numbers for Sale."

The following are the issues I wish to dispose of:

Amazing Stories Monthly—Vol. 1, No. 1 (April, 1926) to Vol. 7, No. 7 (October, 1932) with the sole exception of Vol. 1, No. 4 (July, 1926).

Amazing Stories Quarterly—Vol. 1, No. 1 (Winter, 1928) to Vol. 5, No. 2 (Spring-Summer, 1932).

Amazing Stories Annual—1927.

The issues for the first three years of the monthly (April, '26 to March, '29) are thirty-five cents each, the following issues twenty-five cents apiece. The quarterlies and the annual are fifty cents each. In selling these magazines I intend to adhere to the principle "First come, first served" so as to be impartial to the many readers whose letters have appeared in this column indicating a desire to secure back-numbers of their favorite Sci. Fic. magazine.

CLAUDE A. DAMES, JR.
5042 Northland Avenue,
St. Louis, Mo.

(We like to publish letters from readers who have back-numbers for sale, and this remark applies to your and the preceding letter.—ED.)

A Particularly Good Letter of Criticisms Pro and Con on the Mendelian Investigations of Plant Hybridization

Editor, AMAZING STORIES:

As I have been reading your magazine and others dealing with similar subjects for a number of years. I believe I shall be pardoned for taking up a little of your time.

I like science fiction stories very much. I acquired the seeds of this affliction as a ten-year-old boy (some thirty-five years ago) when I spent many a happy hour with my old friend, Jules Verne, or rather, with one of his books. I may be hard to please, or as the years roll by, may have grown more critical—but, I cannot think of a single science fiction story that would have since given me as much pleasure as the works of that great writer. Ah, them were the happy days of expectant youth, facing the mysteries of life and avidly reading stories that gave the imagination free rein.

I presume that this early experience left in my make-up a preference for stories that make me think and use my imagination in following the writer and attempting to go even beyond. Therefore, I must confess I did not like "Children of the Great Magma" in your August-September issue. I haven't found anything in that story which would in an interesting way tie up present scientific knowledge with some logical future development. However, the story is well written and interesting as a story *per se*, but, to my mind, not what I should class as a science fiction story. In another magazine, I should read it and enjoy it much more. In a science fiction magazine, it seems just a little out of place.

Now that I have started in finding fault, I might as well keep it up until I get it all off my chest. I am always disappointed when a science fiction author makes a statement which a little ordinary care in refreshing his memory by reference to a text book would prove to be wrong. I refer to the story "The Essence of Life" in the same issue. Our friend, the author from across the pond, says that when Mendel crossed tall peas with dwarf peas, some of the offspring were tall, others dwarf and still others intermediate. I believe that he is mistaken and that he could have avoided this mistake had he checked up on this. In his experiments Gregor Johann Mendel found that tallness was the dominant character in the pea plants, in other words, that when you cross a tall pea plant with a short one, the offspring will be tall, and that short or dwarf plants will be produced only

by crossing short plants with short plants. In the same paragraph he says that this offspring bred "true." Such a text book as I refer to will also confirm that the offspring cannot be a "true" or "pure" type; it is a hybrid, for although the recessive character (in this case shortness) is hidden or masked and dominated completely by the dominant character, *i.e.*, the tallness, the plant protoplasm contains one unit character from each of the two parent plants. Under certain conditions of crossing the recessive character will again crop up. However, that would take up too much space and can be looked up in a text book.

The story I like best in this issue is "The Silicon Empire." It gives me something to think about. It is not one of the exciting kind of stories with dramatic situations and climaxes, but is a well written science fiction story. In common with quite a few other science fiction stories, it falls down in one particular. In speaking of life developing from inorganic silicon compounds, the author says that the conditions under which the few silicon compounds are formed that we know of, are different from the conditions under which the corresponding carbon compounds form. Right there a paragraph contrasting the two sets of conditions and enumerating them would furnish a little food for thought to those of us who like to find a point to tie up the known with the speculative. However, I like this story best.

Two short stories, *i.e.*, "Across the Ages" and "The Pellucid Horror" are both well written and easy to read. I do not know which one of the two I should put first with respect to masterly construction, descriptive language and all-around writing technique. From a standpoint of science fiction I prefer "The Pellucid Horror," as there seems to be no scientific statement of any kind, nor a deduction drawn or speculation based on a known scientific fact in "Across the Ages." All the latter story does in that respect is to set one thinking about the vagaries of the human mind under the stress of some strong emotion, coupled with lowered physical and mental resistance due to extremely hot weather. In "The Pellucid Horror" why did the reporter and the scientist see the doctor's clothes, whereas the persons attacked by the physician had not seen them?—Undoubtedly the maniac doctor must have gone out on his trips *sans* clothes, but why should he put them on at home knowing that this would give him away to anyone that might happen to see the spectacle of the animated clothes?

I shall have to quit, for, in this part of the country, it has been hot as blazes for over a month, and the fact that I, who am neither a writer, nor a scientist, have undertaken to criticise the writings of science fiction writers, makes me wonder whether I, myself, am not acting under the influence of some approaching brainstorm due to the heat. I hope the several authors will bear this in mind and cuss the weather and not myself; besides, I believe they are all good sports and realize that my criticisms are well-meant. I also presume all of our author friends have found out a long time ago that a good part of the reward of a science fiction writer comes in the form of "bouquets," or shall we say "brickbats," from a bunch of ignoramuses who are simply jealous because they cannot write such good stories themselves, which includes

Yours for just a little more science in science fiction,

F. F. Rimsa,
15 South 77th Street,
Belleville, Illinois.

(We shall hope to get an answer to this interesting letter from the author of the "Essence of Life." Otherwise your contribution to Discussions tells its own story so well that it needs no answer from the Editor. As regards your wish for more science in science fiction, that is precisely the hard thing to get. It is surprising how little of it comes to us and how many rejections are due to its lack in stories. We shall hope to hear from you often.—EDITOR.)

A Vigorous Defense of the "Time Travel Topic" for Stories by William Kober—Also an Error in Proofreading Noted

Editor, AMAZING STORIES:

Mr. Nixon's letter, in the August Discussions, objecting to a supposed flaw in the plot of my story, "The Man Who Lived Twice" shows that, from some cause or other (perhaps a fault in my style), the main point of the story missed him completely. Mr. Nixon speaks of an "error" in the story, as if the writing of it had been a hasty slapping down of an ill-considered plot; a plot so sketchy or absurd that even its author could not remember it from one page to another!

The truth is quite the contrary. The plot of this story was carefully developed as a *perfectly defensible* method of time-travel. In the Discussions one often sees such phrases as "Cut out time-travel stories, everyone knows they're impossible." Now, "in the bright lexicon" of science fiction, the word "impossible" is anathema, and I thought it would be a good idea to confront these cocksure correspondents with a story of time-travel, which, though far-fetched (as they all must be), could resist at all points the most diligent attempts to prove a flaw or a contradiction of any *known scientific law.*

I started with the undeniable, *experimentally established* fact that time moves at different rates in different places. (This difference of rates is caused by difference in a quantity known technically as "gravitational potential." Einstein and others have given a complete mathematical treatment of the relation between time rate and "gravitational potential.")

Suppose we have a machine which can regu-

late "gravitational potential." Then we can regulate the rate of time in the range of action of this machine. By slowing it up to half-normal, a man in it may live to be 200 years. Here we have time travel of a sort. But imagination immediately carries us from half-normal time rate to tenth normal, to one-hundredth normal, and finally suggests, "Why not bring time to a halt altogether?" What would happen in a region where time did not exist?

Here we have a plot in the best form for science-fiction. By carrying known laws in certain quite valid directions, we arrive at a point where science cannot instruct us. Here fiction, uncontradictable by science, steps in.

This region of no time (called timeless-space in the story), is an abnormal condition, brought about by the concentration of enormous energies. We may therefore suppose it to be unstable, in the same sense that a boiler operating under enormous pressures is liable to explosion. We suppose further that, when the explosion or breakdown does occur, the "timeless space" appears at two different times in the outside world. The "timeless space" is by definition, independent of time in the outside world, you see, so that this view is perfectly natural.

Now put a hero into the machine, and when the breakdown occurs, you have two of him, one in the present, say, and one in the future. To make a story we need only one more thing. If only the "present form" of the hero could remember what happened to his "future form"! Why, he could write up all his adventures in the future, up to the moment of death!

But very obviously, you can't remember what hasn't happened yet, so it is necessary to add another link to the plot—that, in some mysterious way, the "future form" can be considered to precede the "present form" of our hero. In loose but clear language, we suppose that time can turn back upon itself.

If I have tried the reader's patience with this long explanation, it has been for good reasons. First, to show that we authors have gone a long way since we wrote "Bang! bang! bang went his trusty rifle, and three more redskins bit the dust," and went on from there; and second, because it is the only answer to the Nixonian objection, which is too vague to be answered in any but the most general terms. It is my impression that Mr. Nixon thinks that the priority of the "future form" of the hero, explained in the last paragraph, is a careless error upon my part. Strangely enough, he does not voice the obvious but answerable objection, that an event in the future, cannot, in some subtle sense, also be in the past. Instead, he seems to think that this priority of the "future form" will (in some way known only to himself), interfere with the operation of the "gravitational potential" machine, a notion that is plainly preposterous.

Incidentally, that silly-sounding "pill-ball" in the Nixonian communication is really PITH-ball, meaning a spherical mass of a very light plant-substance called pith. And while we are talking of typographical errors, I take this opportunity to tell the A. S. proofreader that I will never forgive him for one he allowed to get into print in the story. In my typed manuscript I had a dramatic passage about a "wall of impassable radiation." A change of two letters transformed it into a satirically critical "wall of *impossible* radiation"! And after I had spent two pages explaining just how the radiation was generated!

William Kober,
652 Southern Blvd.,
New York, N. Y.

(It is always interesting to get a letter from an author replying to critics of one of his stories. This very full letter shows that Mr. Kober knows very well how to take care of himself. We are very contrite for the change of "impassable" into "impossible." There is a certain merit in it though, because it would give suspicions that the printer was "impossible" and the alleged proofreader was "impassable"—at least that comes pretty near the mark. We are not responsible, of course, for what is done in the printing office, but in addition to what is done there, every story receives two proofreadings here in the Editorial Office, yet something is bound to escape us.—EDITOR.)

Three Opinions About the QUARTERLY—"Look Here Upon This Picture and on This"—*Hamlet*

Exhibit A

Editor, AMAZING STORIES QUARTERLY:

I wish to protest strongly, and loudly, against the dirty deal you gave us poor, and heretofore, silent subscribers and purchasers of your publication.

I bought the Winter number the other day, without bothering to carefully examine it, and low and behold, when I get home and start to read it, I find that the main feature story was one which I had read ages ago in your monthly. However, I checked it off, and decided to let the matter slide, as there was considerable reading matter remaining, and I decided that I would receive my money's worth from it. But—what do I find that the next most important story is but a group of stories, also from your monthly—leaving but one short story, for the 50 cents expended.

As a favor, in the future, please either mark the Quarterly "Reprint Number" or else use new stories.

ROGER C. HIGGINS,
Chillicothe, Missouri.

Exhibit B

Editor, AMAZING STORIES:

I have just received the January issue of AMAZING STORIES and the first thing I noticed was that you had published the first installment

of the latest Smith serial, "Triplanetary." Three cheers for Doc! Long may he write.

With Keller, Vincent, Smith, Nathanson, and Miller all having stories printed in the January number, you have certainly started off the new year with a bang. Also I thought Morey's cover illustration was better than usual. All in all, this was a banner issue.

I like the new size that AMAZING STORIES has been whittled down to. There's no denying the fact that it's much handier and convenient. Yet there's just as much reading material as formerly because you have increased the number of pages. It may be just my imagination but it seems to me that, since the magazine has become smaller, the stories have improved to a great extent. Can you explain this fact?

In response to the wishes of your readers, I see that you have removed the offensive subtitles that used to play hob with the interest and suspense of a story. A very wise move, Mr. Editor, and one you won't regret.

Now, may I say just a few words about the Quarterly? "The Second Deluge," by Garrett P. Serviss, was a masterpiece of science fiction in the fullest sense of the word. A finer story has never appeared in the pages of AMAZING STORIES. The current QUARTERLY ought to satisfy the demads of those who are always clamoring for a reprint quarterly. "The Menace," by Keller, and Jules Verne's story are both reprints as is "The Second Deluge."

However, publish as many reprints as you like; I'm for 'em.

ROBERT TUFTS,
61 Rathbun Ave.,
White Plains, N. Y.

Another Exhibit B

Editor, AMAZING STORIES:

I have just finished reading "The Second Deluge" published in your last Quarterly issue of your superb magazine, and I can't refrain myself from instantly writing to you, before I read the whole magazine.

This story, to my liking, is the best I ever read of fiction in either English or Spanish languages, and certainly I would like to get acquainted with more of Professor Garrett P. Serviss' productions, such as "A Columbus of Space," and others. If any more, would you be kind enough to tell how I can procure them?

I first came in contact with your magazine when I bought the October number from a book store in this town. And after I read it I placed an order in the same store, so as to be sure of getting every number published, which will be saved for me. A couple of days ago I bought the Quarterly for Winter, 1933, and I am sure pleased. "The Second Deluge" is worth the money paid for it fifty times over, and the entertainment I had from its reading is unequaled, although I had to stay up late at nights, unwilling to discontinue.

Now I am anxiously awaiting for the November issue which ought to be here by now, but is not.

RAFAEL VILLEGAS,
P. O. Box 1419,
San José, Costa Rica, C. A.

(These three letters illustrate the trials of an Editor, but there is one comfort in this case. We know that we cannot please everybody, but here at least we have two correspondents in our favor out of three, and that perhaps is not such a bad average after all. We let the letters speak for themselves.—EDITOR.)

The British Interplanetary Society

Editor, AMAZING STORIES:

I would be obliged if you would publish this letter in your "DISCUSSIONS" columns for the information of your British readers who may be interested.

I wish to inform you of the formation of the British Interplanetary Society at the address given below. The Society is run on similar lines to the American, French and German societies. Its objects, to quote from the Constitution, are "the stimulation of public interest in the possibilities of interplanetary travel and the dissemination of knowledge concerning the problems which at present hinder the achievement of interplanetary travel. This involves the establishment of a Central Headquarters of the Society, which will include a fully equipped laboratory for the use of members engaged in active research."

The society is arranging for the establishment of branches throughout Great Britain. Each branch will concentrate on some particular phase of space travel, as allocated by the Central Office. By this means, co-operation will be assured and wasteful repetition obviated.

Three classes of membership are open to individuals—Fellowship, Membership, and Associate Membership. Associate Membership is for those under twenty-one years of age.

All members will receive free copies of the Journal of the Society which will contain news and articles on the different aspects of interplanetary travel.

Ordinary meetings of the Society are held fortnightly on Fridays from November 17th at 81 Dale Street, Liverpool, England. The office is on the second floor, Room 15, and the meeting starts at 6:30 P. M. lasting until 9 P. M.

Those interested can obtain any further particulars by writing to the Secretary at the above address.

Wishing you all future success with AMAZING STORIES.

LESLIE J. JOHNSON,
Honorary Secretary,
The British Interplanetary Society,
34, Oarside Drive, Wallasey, Cheshire,
England.

A Baby In Your Home

Scientists now state that "Complete unity in life depends on sex harmony" and that the lack of it is the one greatest cause for unhappy marriages. Also that every woman "has the capacity for sex expression" but too often she is undeveloped or suffering with general female disorders, which rob her of her normal desires. During an experience of more than 35 years specializing in the treatment of diseases peculiar to women, I developed a simple home treatment which has brought new hope, health and happiness to many thousands. Many who had been childless for years became proud and happy Mothers. Husbands have written me the most glowing letters of gratitude and now I want every woman who is run-down or suffering from female disorders to learn about this splendid treatment, and how she may use it in the privacy of her own home.

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